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ABSTRACT

This document is a compilation of completed research in the areas of health, physical education, recreation and allied areas for the year 1961 and for part of the year 1960. The compilation is arranged in three parts. Part I contains an index showing cross references for all listings in parts II and III. Part II contains a bibliography of research, citing articles published in 97 periodicals and Part III contains listings and abstracts of unpublished masters and doctoral theses for 31 graduate programs of health, physical education, recreation and allied areas. There is a total of 412 references in the bibliography and 367 listings of masters and doctoral theses. (HB)

Volume 4

1962

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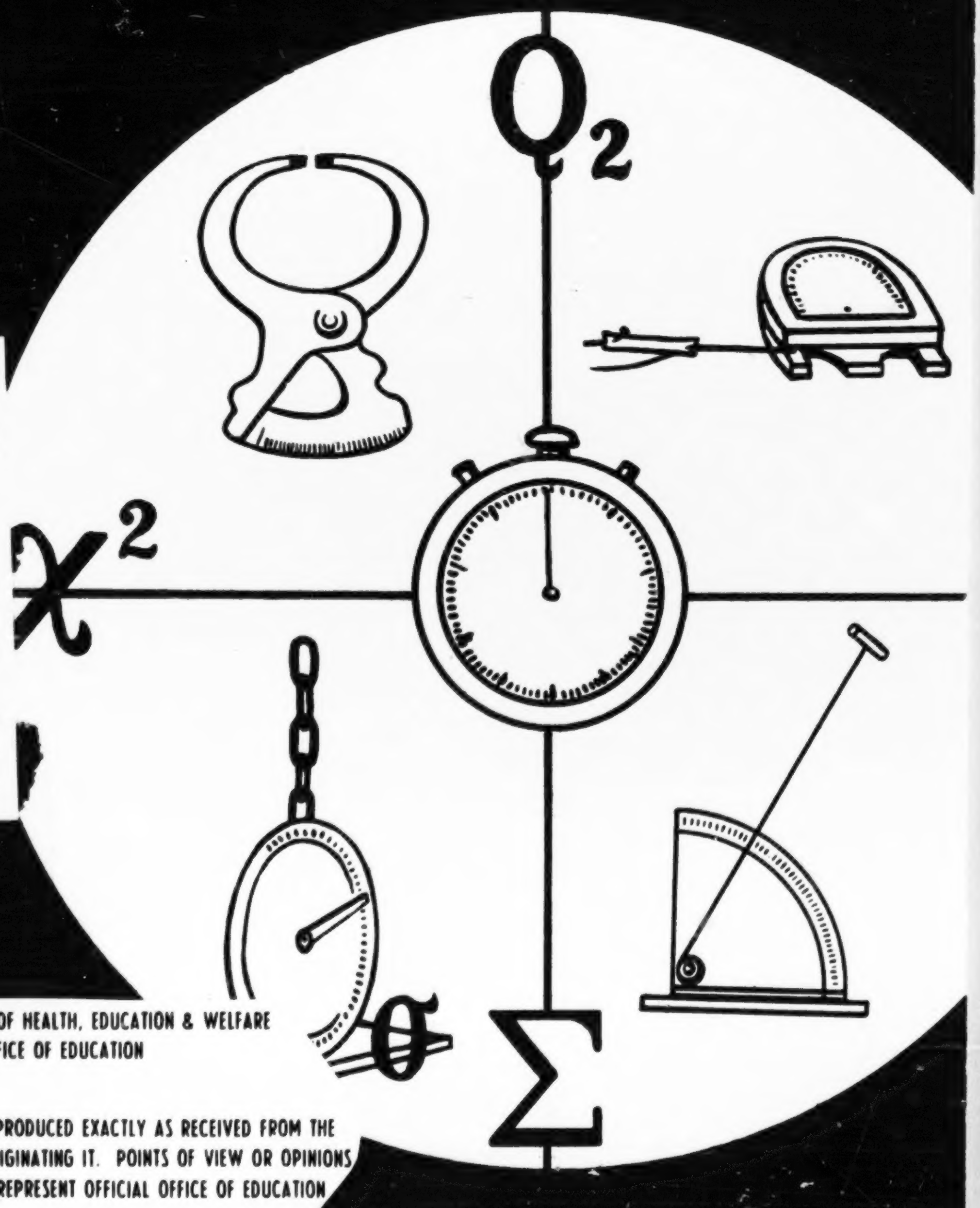

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COMPLETED RESEARCH

in health, physical education, and recreation

Periodicals Reviewed

*Abstracts of World Medicine
*Acta Medica Scandinavica
*Acta Orthopaedica Scandinavica
*Acta Physiologica Scandinavica
American Association of University Professors Bulletin
*American Heart Journal
*American Journal of Anatomy
*American Journal of Cardiology
*American Journal of Clinical Nutrition
American Journal of Human Genetics
American Journal of Hygiene
*American Journal of the Medical Sciences
*American Journal of Medicine
American Journal of Orthopsychiatry
*American Journal of Physical Anthropology
*American Journal of Physical Medicine
American Journal of Physiology
*American Journal of Psychiatry
*American Journal of Psychology
*American Journal of Public Health and the Nation's Health
*American Review of Respiratory Diseases
*Anatomical Record
Annals of Applied Biology
Annals of Clinical Medicine
*Annals of Human Genetics
*Annals of Internal Medicine
*Annals of Physical Medicine
Annual Review of Medicine
Annual Review of Physiology
Arbeits Physiologie
*Archives of Environmental Health
*Archives of Internal Medicine
*Archives of Physical Medicine and Rehabilitation
Archives of Surgery
Athletic Journal
*Australian Journal of Experimental Biology and Medical Science
*British Heart Journal
British Journal of Industrial Medicine
*British Journal of Nutrition
*British Journal of Preventive and Social Medicine
*British Journal of Psychology
*British Medical Bulletin
*British Medical Journal
*California Clinician
California Journal of Educational Research
*California Medicine
Camping Magazine
Canadian Journal of Psychology
Cancer Research
Child Development
*Child Development Abstracts and Bibliography
Circulation
*Circulation Research
*Clinical Science
*Current Therapeutic Research
Education Abstracts
Educational and Psychological Measurements
Educational Research Bulletin
Experimental Cell Research
*Federation Proceedings
Genetic Psychology Monographs
*Geriatrics
Growth
Human Biology
*Indian Journal of Medical Research
Industrial Medicine and Surgery
*Internationale Zeitschrift fur Angewandte Physiologie
Journal of Abnormal and Social Psychology
*Journal of the American Dietetic Association
*Journal of the American Medical Association
*Journal of the American Osteopathic Association
*Journal of Applied Physiology
*Journal of Applied Psychology
*Journal of the Association for Physical and Mental Rehabilitation
*Journal of Bone and Joint Surgery
*Journal of Clinical Investigation
*Journal of Clinical Psychology
*Journal of Comparative and Physiological Psychology
Journal of Educational Psychology
*Journal of Educational Research
Journal of Educational Sociology
Journal of Experimental Biology
Journal of Experimental Education
Journal of Experimental Medicine
*Journal of Experimental Psychology
Journal of General Physiology

(Concluded on page 90)

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* References are reported in this issue of Completed Research.

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COMPLETED RESEARCH

in health physical education recreation

VOL. 4—1962 EDITION
covering research completed in 1961

Edited by

ALFRED W. HUBBARD
and
RAYMOND A. WEISS

for the
RESEARCH COUNCIL
of the

AMERICAN ASSOCIATION FOR HEALTH,
PHYSICAL EDUCATION, AND RECREATION

A Department of the National Education Association

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INTRODUCTION

THIS COMPILATION lists research completed in the areas of health, physical education, recreation, and allied areas for 1961. It also lists some research completed in 1960 which was not submitted for Volume 3.

The compilation is arranged in three parts: index; bibliography of research published in periodicals; and abstracts and listings of unpublished masters' and doctors' theses.

Periodical references are compiled by the Committee for Completed Research, listed below. Theses abstracts are sent in by the Institutional Representatives (names in parentheses following name of institution in Part III). All materials are then organized, indexed, and edited by the Chairmen of the Committee for Completed Research.

Part I—Index

In the index, cross references are given for all the listings in Parts II and III. References may be located under the subject headings, which are arranged alphabetically in this index. Instructions for using the index are given at the top of page 1.

Part II—Published Research

Part II contains a bibliography of research, citing articles published in 97 of the 161 periodicals reviewed by the committee. References are listed alphabetically by author.

Part III—Unpublished Masters' and Doctors' Theses

Part III lists completed masters' and doctors' theses for 31 graduate programs of health, physical education, recreation, and allied areas. Most of the references are accompanied by abstracts of the research. All references are numbered in alphabetical order under the sponsoring institutions, which are in turn listed in alphabetical order. Names of Institutional Representatives sending in these abstracts are indicated in parentheses after the name of the institution.

It is hoped that research workers will find this fourth compilation of completed research a convenient reference source.

COMMITTEE FOR COMPLETED RESEARCH
IN HEALTH, PHYSICAL EDUCATION, AND RECREATION

CAROLYN BOOKWALTER
PETER W. EVERETT
ALFRED W. HUBBARD, *Co-chairman for Theses Abstracts*
JOSEPH E. LANTAGNE
LEONARD A. LARSON
KENNETH D. MILLER
PHILIP J. RASCH
CELESTE ULRICH
RANDOLPH W. WEBSTER
RAYMOND A. WEISS, *Co-chairman for Bibliography*

Part I INDEX

The Index enables the reader to refer to the items of completed research listed in Parts II and III. Research topics are arranged in alphabetical order. The reference numbers following each topic correspond to the listings of completed research dealing with that topic. The capital letter B indicates a reference to be found in the Bibliography (Part II); the capital letter T indicates a reference to be found in the Theses Abstracts (Part III). The numbers indicate the order in which items are arranged in each Part.

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Part III THESES ABSTRACTS

University of British Columbia, Vancouver, British Columbia (M. L. Howell)

1. BROWN, Annie May. The Effect of Circuit Training on the Physical Fitness of Grade 5 Girls. (M. L. Howell)

Two classes were tested on the AAHPER Fitness Test before and after eight weeks of regular physical education classes. The experimental class, chosen by chance, had a supplemental 10-minute circuit training program before each class. Both classes showed significant gains in total score. The experimental group showed significant gains on all tests except the 50-yard dash. The control group showed significant gains on all tests except the pull-ups (modified) and 50-yard dash. The mean differences between groups were not significant, but the experimental class made greater gains except in the shuttle run. The supplemental circuit training produced generally better, but not significantly better, results than the regular program.

2. HUNT, Edmund Arthur. An Electrocardiogram Study of Champion Swimmers. M. P. E. in Physical Education. 1961. (M. L. Howell)

There were 19 highly trained and healthy teen-age swimmers of championship caliber tested in blood pressure, pulse rate, and electrocardiograms before and for 30 minutes after regularly scheduled meets. One swimmer was tested twice, two years apart. Pre-race ECGs showed no evidence of cardiac disease according to medical standards, but post-race ECGs showed P-R prolongation in 13 instances, lowered T wave in all cases, inverted T waves in nine cases, and ST segment depression in nine cases. Of the 20 cases, 18 showed one or all of the major deviations, but these indicated nonpathological functional adjustment of the myocardium to physical and emotional stress.

3. TAYLOR, Bryce M. The Effects of Certain Fitness Programs upon the Cardio-Vascular and Muscular Status of Businessmen. M. P. E. in Physical Education. 1961. (M. L. Howell)

In the Vancouver YMCA, 42 businessmen were equated into two experimental groups, using calisthenic and circuit training programs for eight weeks; an equated group of 21 British Columbia Electric workers was used as a control group. All subjects took the Larson Muscular Strength Test and Harvard Step Test before and after the experimental period. Both experimental groups gained significantly on both tests, but the differences in mean improvement were not significant. Both programs effected improved cardiovascular and muscular status of businessmen.

University of California, Los Angeles 24, California (C. H. Young)

4. BAKER, Robert Francis. The Effects of Anxiety and Stress on Gross Motor Performance. Ed. D. 1961. 98 p. (V. Hunt)

At UCLA, 61 male students with scores more than 1 standard deviation above (high anxiety) and below (low anxiety) the mean on the Pittsburgh Revision of the Manifest Anxiety Scale were used as subjects and assigned randomly in each category to experimental and control groups. The test consisted of matching a specified foot pattern while walking at 2 mph on a treadmill for 1.5 minutes, with total missteps consistituting the error score. The experimental groups received shock at predetermined intervals. Subjects had two trials with pulse rate recorded before and after each trial. Following each trial, the subjects rated themselves on the anxiety during the test. The findings supported the hypothesis that stress inhibited efficient functioning of high anxiety subjects and facilitated the performance of low anxiety subjects. Absence of stress produced better performance in high anxiety subjects than stress.

5. BLIX, Robert Clinton. Relationships Among Selected Isometric Strength Phenomena. M. S. in Physical Education. 1961. 57 p. (D. Handy)

Twelve isometric strength measurements involving unilateral and bilateral flexion and extension of the knees and elbows at recommended angles were taken with a cable tensiometer on 72 healthy male college students after four weeks in body conditioning classes. Two to four trials were given and the highest reading converted to pounds was used in computing means, standard deviations, and correlations on IBM machines. The highest r of .87 occurred between right and left elbow flexion. Only unilateral and bilateral strength of the same joint and action gave statistically significant correlations. Aside from these, the intercorrelations were not significant and indicated specificity of strength. Bilateral strength was not twice unilateral strength.

6. BOLEN, Janet Elaine. Figure-Ground Perception in Women Majors in Dance and in Physical Education. M. S. in Physical Education. 1961. 78 p. (V. Hunt)

The Body Image Projective Test and the Gottschaldt Embedded Figures Test were administered to 38 dance majors and 70 physical education majors at UCLA. Mean differences between groups on both tests were attributable to chance. Significant reliability coefficients were found for both groups on the Body Image Projective Test, and the intercorrelation between tests for 24 randomly selected subjects was significant at the .01 level. No significant difference between dance and physical education majors was found for figure-ground perception as measured by the two tests.

7. BRATTON, Robert Dickson. The Effect of Intensity of Exercise on Multiple Blood Serum Enzyme Levels. M. S. in Physical Education. 1961. 41 p. (V. Hunt)

Concentrations in venous blood of glutamic oxalcetic transaminase, glutamic pyruvic transaminase, aldolase, lactic dehyrogenase, and malic dehydrogenase were tested before and after 15-minute treadmill runs at four inclinations. Significant differences in blood serum enzyme levels proportionate to exercise intensity were found, and presumably the increased efflux of enzymes from the muscle cells resulted from an increase in membrane permeability. Differences in post-exercise concentration between individuals were partially attributable to differences in the level of physical conditioning or training, and differences in efflux of enzymes from the cells were roughly proportional to molecular weight.

8. CRATTY, Bryant Jackson. A Comparative Study of the Relationship of Learning a Fine Motor Skill to Learning a Similar Gross Motor Skill Based on Kinesthetic Cues. Ed.D. 1961. 118 p. (V. Hunt, B. Miller)

Sixty male university students in two equal groups were given 12 blindfolded trials on either a 40-yard locomotor maze or a 44-inch stylus maze with similar fluid patterns and no blind alleys. Then the group problem was reversed. Traversal time was measured but no error count was kept. After each trial subjects reported the sensory impression depended upon (vocal, motor, tactual, visual, or combined) and drew the maze pattern. Learning curves were typical, with variability decreasing as learning progressed. Analyses of variance of mean traversal time categorized on the basis of drawing accuracy (accurate, fair, inaccurate, or no reproduction) and the type of sensory impression were not significant. The low correlation between performances on the two mazes indicated specificity. The contingency coefficient between "sensory impressions" for the two mazes was low, but contingency coefficients between drawing accuracy for the two mazes was fairly high.

9. DALIS, Gus Thomas. Development and Application of a New Health Appraisal Instrument. M. S. in Health Education. 1961. 105 p. (W. Sutton)

A new test was developed to evaluate health instruction in the three Alhambra high schools. Used as subjects were 14 health and safety teachers, 225 A and B scholarship students in health and safety classes, and 235 A and B scholarship students from selected freshman classes. The results indicated that subjective appraisals were admissable in evaluation, that students in classes had better health knowledge, attitudes, and practices than other students, and that teacher competence affected assimilation of material by students.

10. HEROD, Joyzelle. Implications for Physical Education from the Body Image Concept. M. S. in Physical Education. 1962. 55 p. (V. Hunt)

Literature in neurology, physiology, psychology, psychoanalysis, and rehabilitation was reviewed. This indicated that the body image continually changed and developed, that it was affected by tactile and kinesthetic sensations, that it depended partly on social and cultural factors, and that individual behaviour was influenced by the security of the image. The major implications were that physical education should broaden its scope to include sensory motor experiences for the development of a strong image and that group counseling should be used to aid in developing a secure body image.

11. HOSEASON, Geraldine Lorraine. Rhythm-Motor Experience in Motivating Chronic Catatonic Patients. M. S. in Physical Education. 1961. 95 p. (V. Hunt)

Two groups of ten subjects each were selected from chronic catatonic or highly regressed schizophrenic patients at the VA (Brentwood) hospital, Los Angeles. The control group followed the regular hospital routine. The experimental group met weekly for 16 months to beat simple rhythms on drums, move to the rhythm, communicate verbally, and finally participate in a social dance situation. Overt behavior and attitudes were evaluated before and after the experiment. The experimental group made appreciable progress toward resocialization.

12. HUBBARD, Elisabeth Vickery. An Experimental Investigation of the Phenomenology of Kinesthetic Perception in Its Relation to Certain Measures of Movement Capacity. Ed. D. 1961. 451 p. (R. Abernathy, V. Hunt)

Assuming personal style of movement was natural and liked, a change in motor responses (expansion) from varying affect and identification and increased accuracy from maintaining personal identity was postulated. Kinesthetic perception was measured in terms of cues for total movement, written reports of "how it felt" (feeling) and "what it felt like" (imagery), ratings of responses as natural-neither-strange (identification), and liked-neutral-disliked (affect). For self-other reference, natural-liked was equated with "self" and strange-disliked with "other." Experimental data were collected from 32 and 26 college students. Three trained observers rated speed, force, and path gradients of responses. From these ratings, habitual and semi-habitual repertoires of movement were constructed for single cue responses, and triple cue responses were scored for frequency and variety of expansion. Weighted discrepancies of responses from cue elements were used as accuracy scores. No significant correlation was found between accuracy and any perceptual index. Expansion scores correlated positively with conformity to the basic perceptual axis and negatively with departures from it.

Veridical perception (agreement between subject's perceptions and experimentally determined habitude) was not significantly correlated with any performance measure but added a third dimension to perception which correlated significantly (.45) with accuracy and expansion (.62 for frequency and .47 for variety). Conformity to cues depended on veridicality and clarity of self-other percepts; departure from habitual movement depended on equating effect and identification and maintaining identity against affect stress; and variety of novel response depended on self-other percepts. Feeling and imagery extended self-world perception and reinforced self-other percepts.

13. LOHR, Ruth Stillman. The Construction of a Health Knowledge Test for the Upper Elementary Grades. M.S. in Health Education. 1961. 83 p. (E. Johns)

The test for grades 4, 5, and 6 was based on proportionate emphases of 15 texts on 14 areas. Two trial forms were administered; item discrimination was determined, and split-half reliability was corrected by the Spearman-Brown formula. Seventeen items from the first test and 31 from the second met the .20 validity criterion established by Flanagan. Two items were added to maintain proportionality, and the reliability of the 50-Item test was .846.

14. LUOBIKIS, Norma Jean. Problems of Students Who Like and Dislike Physical Education. M.S. in Physical Education. 1961. 74 p. (W. Massey)

Massey's Activity Scale and the Mooney Problem Checklist, College Form were administered to 45 freshman and sophomore students who did and did not elect a physical education class. Significant differences were found by chi square in frequency of problems among sophomore students who like and disliked physical education in both the non-physical education and total sample, for freshmen who did and did not elect physical education, and for freshmen and sophomores in the non-physical education group. The remaining comparisons were not significant.

15. MARSHALL, Mary Elizabeth, Differences in Health Behavior of Mexican-American and Anglo-American High School Students. M.S. in Health Education. 1961. 96 p. (E. Johns)

The LeMaistre Health Behavior Inventory for Senior High School was administered to 954 Anglo-American students and 221 Mexican-American students in two high schools in Orange County. By stratified and then random sampling, groups of 100 each were selected for study. The Anglo-American sample was more variable but had a higher mean on the total inventory and was significantly higher in family health, safety education, community health, personal health, and communicable diseases. Both groups showed need for further education in rest, sleep, and relaxation, safety education, consumer health, nutrition, chronic and degenerative diseases, and personal health.

16. MARTIN, Robert Boyd. The Effect of Pelvic Tilt on Vertical Jumping Ability. M.S. in Physical Education. 1961. 62 p. (M. Latchaw)

Two groups of 15 each, equated on pelvic tilt, lumbar curve, and vertical jumping ability, were obtained from the boys posture classes in a Los Angeles junior high school. Pelvic tilt was measured with an inclinometer, lumbar curvature with an architect's flexible rule, and the best of three jumps was used. The experimental group had a six-week exercise program. Both groups increased in vertical jump ability and decreased in pelvic tilt, but final between-group differences tested by t were not significant. Within-group differences in both groups for vertical jump were significant. Pelvic tilt had little relation to jumping ability.

17. MCDANIEL, Lucy Virginia. Critical Behaviors of Staff Physical Therapists. Ed. D. 1961. 113 p. (V. Hunt, R. Abernathy)

Behavioral factors important in judging treatment were obtained from administrators in physical therapy schools as a basis for a questionnaire. From 159 hospital administrators observing patient treatment by physical therapists, 414 usable critical incidents were obtained. The critical incidents were assigned positive or negative value and categorized. Treatment by chi square showed no sampling bias from geographical locale, hospital size, or patient age. A significant sex difference was found in adjusting treatment for female patients and assessing male patients. Other significant chi squares were used to select valid critical behaviors from the original list of criteria. Newly identified critical behaviors included assessing appliances, dimensions of treatment, and use of reinforcements.

18. MEANS, Richard Keith. A History of Health Instruction in the United States. Ed. D. 1961. 819 p. (E. Johns)

Health instruction in educational institutions from 1787 to 1961 was treated following a brief discussion of man's quest for health from ancient times through the colonial period. European developments stimulated Alcott, Barnard, and Mann, and more especially Harvard and Amherst College, to develop health education. From 1850 to 1900, educational groups and the Scientific Temperance, physical education, medical inspection, and child study movements accelerated the growth of health education. Open-air classrooms, White House Conferences, the Modern Health Crusade, and organized health education began before 1920. Joint committees from the NEA, AMA, National Tuberculosis Association, and Metropolitan Life inaugurated important health work. During the third and fourth decades, experimentation with health instruction methods, significant demonstration studies, and new organizations, conferences, and reports evolved a new philosophy and led to professional preparation. The conference method of problem-solving continued after 1940, but research increased in prominence and health education emerged as a discipline and as an essential facet of the curriculum.

19. NUNNEY, Derek Normond. Physical Activity, Fatigue, and Motor Learning. Ed. D. 1961. 173 p. (R. Abernathy, V. Hunt)

Eighty college men were equated into five groups on the basis of scores on the Snoddy Stabilometer. The control group rested but the other groups each exercised for five minutes at one of four predetermined levels of intensity--two on the bicycle ergometer and two on the treadmill. Pulse rates were taken before, after, and ten minutes after exercise, and the subjects rated intensity of fatigue on a nine-point scale. Scores recorded during six practices held on alternate days with the Stabilometer and rotary pursuit meter were used for learning curves, and at the end the subjects rated each activity from pleasant to unpleasant on a nine-point scale. The final scores of the control group on the Stabilometer were significantly better than those for the exercise groups, but levels of exercise produced no significant difference in learning rate. Following a ten-minute recovery, group differences in level of learning on the pursuit meter were not significant. Groups reported feelings of fatigue proportionate to the intensity of the exercise, but the correlation between pulse rate changes following activity and fatigue reports was very low. Higher changes in pulse rate and more intense feelings of fatigue were not related to decreases in learning, and the detrimental effects of any level of activity (other than none) were approximately equal--within the range studied.

20. PARSONS, Howard Lewis, Jr. Relative Effectiveness of Teaching Motor Learning Through Television. M.S. in Physical Education.

1961. 90 p. (W. Massey)

Two matched groups of nine each received eight 20-minute lecture-demonstrations on learning the kip on the horizontal bar, the control group directly and the experimental group by television. Subjects' performance records and filmed records judged by experts provided data for use in a two-way analysis of variance for ranked data proposed by Friedman. A difference in favor of the control group was significant at the .15 level, which suggested that the television method used was less effective than direct teaching for this activity.

21. RESER, James Marshall. The Effect of Increasing Range of Motion on Vertical Jump. M.S. in Physical Education. 1961. 72 p. (D. Handy)

Hip and ankle flexion and hyperextension and vertical jumping ability were measured in 20 regular and major physical education students before and after a program of stretching exercises. Significant increases in flexibility resulted, but only increased ankle extension correlated significantly with jumping ability.

22. ROBERTS, Kenneth Arthur. Status Leaders as Motivators in Health Education. M.S. in Health Education. 1961. 67 p. (W. Sutton)

In grades 7 through 9, 96 boys were divided into two equated groups on the basis of the Wilkes Health Practice Inventory, which was also used on the post-test. Health discussions in the experimental group were led by status leaders but not in the control group. The mean gain of the experimental group was from 200 to 201 and of the control group from 200 to 205. The mean difference on the post-test in favor of the control group gave a t of 1.10 at the .25 level of confidence, and the mean gain in the control group (4.38) was at the .15 level. Since health practices of junior high school students tend to deteriorate, the use of status leaders had some motivational value.

23. RUBINO, Kenneth John. Comparative Learning Speed and Attainment Level of a Swing Kip on the Horizontal Bar. M.S. in Physical Education. 1961. 85 p. (C. Young)

Two equated groups were selected from male apparatus and tumbling classes at UCLA. Form was emphasized in the experimental group. After eight alternate 30-minute classes, motion pictures were taken during the ninth session and the subjects were ranked for success of performance. The control group learned the kip faster (.20 level of confidence) but the form of the experimental group was consistently better. Since form is an integral part of gymnastic skill, emphasis on form during learning seemed desirable.

24. SHVARTZ, Esar. Cardiovascular Adaptations in Selected Postures. M.S. in Physical Education. 1962. 61 p. (R. Snyder)

Two groups of ten subjects each, ranging in age from 18 to 38, were selected on the basis of the Crampton Index with those having scores of 65 and above being classed as fit and those with scores of 35 and down unfit. Heart rate by palpation and blood pressure by sphygomanometer were tested in the lying position and in the inverted position, using a tilt table. The unfit subjects showed no significant change in either measure. The fit subjects increased arterial blood pressure in the inverted position with no significant change in heart rate. The blood pressure reactions of both groups in going from lying to inverted were similar to those found in going from the lying to the standing position.

25. STEEL, Mary Susan. A Comparison of Audiometric Test Results Following Different Pre-test Preparation Plans. M.S. in Health Education. 1961. 83 p. (W. Sutton)

Previous experience showed that many grade 4 students rated defective in an initial group audiometer test (18/group) passed an immediate group retest or an individual threshold test. This suggested that preliminary classroom preparation might increase the efficiency of the group audiometer screening. All 669 grade 4 students in 12 Inglewood elementary schools were divided into four groups, with three getting different preparation and the fourth no preparation. A single orientation lesson appreciably decreased unnecessary retests and two or more lessons were more effective.

26. STEINBISS, Annemarie Josephine. The Cultural Arts in Recreation. M.S. in Physical Education (Recreation). 1961. 187 p. (S. Arnold)

Recreation literature was reviewed for principles concerning promoting art, dance, drama, and music; cultural arts programs in four municipal recreation agencies were surveyed. Some municipal recreation departments had effective cultural arts programs, but some city commissioners and council members were indifferent to cultural arts programs or lacked knowledge of how to broaden the recreation program. Principles and guidelines for developing and expanding cultural arts in recreation programs were developed.

27. STOCK, Malcolm. The Influence of Various Track Starting Positions on Speed and Acceleration. M.S. in Physical Education. 1961. 68 p. (V. Hunt)

Subjects were 26 junior and senior high school sprinters familiar with but not expert in starting from blocks. Time at 20 and 50 yards was measured with a .001 second photoelectric cell timer using elongated, medium, medium-high, and bunch starts. The medium-high start gave the fastest time for 50-yard dash. Starting medium and medium-high gave significantly faster times between 20 and 50 yards. Average acceleration was greater with the medium and medium-high starts but the differences were not significant.

University of Colorado, Boulder, Colorado (E. Willis)

28. DRESSEN, Clyda June. The Value of a Loop Film in Teaching the Crawl Stroke. M.S. in Physical Education. 1961. 51 p. (K. Ley)

Forty-two junior high school students who could not swim across the pool and were not "fear" cases were divided into two equated groups from scores on Scott's Motor Ability Test. Both groups had equal instruction in the crawl stroke, and the experimental group had supplemental loop films for self-help and for helping the teacher correct errors. Three judges rated performance during two trials; the sum was used as the trial score, and the better score of two trials was used as the final score. Correlations between judges' ratings were all .86 or above. The $\bar{t}$ for mean differences between groups was not significant at the .05 level.

29. PETERS, Virginia Lee. The Construction and Production of a Sound Motion Picture for Orientation and Recruitment. M.S. in Physical Education. 1961. 92 p. (E. Willis)

A 16 mm sound film to orient high school seniors and college freshmen and to aid in recruiting health and physical education majors at Central State College, Edmond, Oklahoma, was planned and produced. Students and faculty at Central State College and Oklahoma State University judged the film suitable for its purpose.

30. SPENCER, Patricia May. Movies, Slides, and Demonstrations as Aids in Teaching. M.S. in Physical Education. 1961. 45 p.

(E. Abbott)

Three groups of 30 grade 11 girls each participated in a two-week dance unit with equal explanation of the movement patterns. Movies were shown to one group and reshown when needed; still slides were shown daily to the second group and retained on the screen during practice; and the third group had instructor demonstration before and as needed during practice. Judges rated performance of the three movement patterns in the unit at the end. Analysis of variance showed no significant difference in performance resulting from the three visual aids.

Florida State University, Tallahassee, Florida (P. W. Everett)

31. BERRINGER, Orville M. The Effect of a Standard Rowing Machine Exercise on the Arterial Blood Pressures of the Adult Male and Female. M.S. in Physical Education. 1961. 69 p. (H. K. Campney)

32. FLANAGAN, John J. A Descriptive and Mechanical Analysis of the First Three Dives in the Reverse Group. M.S. in Physical Education. 1961. 65 p. (P. W. Everett)

33. SHEPARD, John Albert. An Analysis of the Leisure Interests of the Patients in W. T. Edwards Hospital, Tallahassee, Florida, for the Purpose of Reorganization of the Recreation Program. M.S. in Recreation. 1961. 46 p. (W. J. Tait)

34. STEWART, Chad L. The Effects of Proprioceptive Neuromuscular Facilitation and Strength Specificity on Strength Development. Ed.D. in Physical Education. 1961. 84 p. (P. W. Everett)

35. STONE, William J. An Evaluation of the Professional Preparation of the Special Teachers of Physical Education in the Elementary Schools of Hillsborough County, Florida. M.S. in Physical Education. 1961. 53 p. (M. V. Alexander)

George Williams College, Chicago 15, Illinois (C. O. Paulson)

36. GALL, Hermann H. The Use of the Lueneburger Stegel in the Movement of Elementary School Children. M.S. in Physical Education. 1961. 56 p. (P. Dunsing)

The Lueneburger Stegel consists of three beams, two standards, a ladder, and a slide or jumping board. Its simplicity and versatility stimulate informal, creative movement in elementary school children. The history of the equipment, the philosophical background for exercises, and a program of exercises are included in the thesis.

37. RAJPUROHIT, Bhopal Singh. Undergraduate Professional Preparation of Teachers in Health and Physical Education in Rajasthan, India. M.S. in Physical Education. 1961. 56 p. (D. Misner)

The one-year curricula leading to a diploma and a certificate provide only professional education at different levels. Three years of liberal and professional preparatory work are recommended for candidates passing the higher secondary school examination. Courses conducive to producing superior health and physical education teachers, criteria for selecting students and faculty, and appropriate facilities are also discussed.

38. SCHROEDER, Horst-Hartmut. The Pneumogram as a Measure of Neuromuscular Relaxation. M.S. in Physical Education. 1961.

20 p. (J. Norris)

Since, in quiet breathing, the mechanical recoil of the ribs will be shortest when the muscles are completely relaxed, a decrease in the portion of the pneumogram indicating expiration was expected to indicate a decrease in neuromuscular tension which would be useful in testing progress in neuromuscular relaxation. Five pneumograms of thoracic and abdominal breathing were recorded on smoked paper, projected on ledger paper, traced, divided into expiration and inspiration, cut out, and weighed. All five curves feel in the interval of 1.8% of the expiration phases. A positive correlation between neurovoltmeter and pneumogram data taken simultaneously was significant at the 0.5 level, so pneumograms cannot be used to indicate neurovoltmeter readings but can be used to indicate relative relaxation. Although most subjects moved in a positive direction, no significant change was found in 21 students tested before and after nine-week training in relaxation.

39. VARKEY, Varghese C. Physical Education Curriculum for Higher Secondary Schools in Mysore State, India. M.S. in Physical Education. 1961. (H. Westerberg)

Although physical education has not been compulsory, arguments for encouraging the trend to include it in the school curriculum were presented. Standards for play areas, equipment, and leadership were developed. Simple and inexpensive fitness tests were included as an aid to planning and evaluating the program. A curriculum for Standards (grades) 10, 11, and 12 was developed as a guide for the physical education teacher.

40. VENDL, William C. Criteria for Predicting Success in the Modern Pentathlon. M.S. in Physical Education. 1961. 103 p. (W. Fenstemacher)

Questionnaire returns from 55 pentathletes active since 1954 showed that the successful ones were distinguished by a knowledge of more pentathlon related sports before training, an I. Q. of 141, some financial educational assistance, competition in approximately six individual sports, playing chess occasionally, never smoking, being slightly underweight for their body build, having a low pulse rate (56 at rest), having low blood pressure, having five diseases in their lifetime, having the family wage earner in the "service" category, being cautious, self-sufficient, and self-confident.

41. WIETERS, Nelson E. Recreation Education in the United States in 1960. M.S. in Community Recreation. 1961. 95 p. (R. Case)

The problem was to evaluate the potential for preparation in community recreation by comparing the curriculum at George Williams College with present curricula in other colleges in the United States. Comparison of 78 academic courses, 62 activity courses, and practices at the College indicated that most of the elements for an "ideal" curriculum were already present. A few areas of differing emphasis and deficiencies were found. However, lack of agreement between the two sample groups and within each group indicated that designing a curriculum in accord with the majority feeling was impossible.

Illinois State Normal University, Normal, Illinois (E. D. Kelly)

42. BUTLER, Kathleen Dawn. Creative Accompaniment for Synchronized Swimming. M.S. in Education. 1961. 39 p. (M. Gray)

Original percussive and human sounds made on deck and under water, choral reading, and projected line drawings accompanying synchronized swimming were developed as a means of raising the artistic quality of swimming productions. These were tested in a swimming production by high school students and were found workable and effective.

43. KLINGENBERG, Mary Ann. Health Interests of Girls in Four Decatur High Schools. M. S. in Education. 1961. 129 p. (E. Kelly)

The Cushman-Bennett Health Problem Check List was administered to 1691 girls in four high schools in Decatur, Illinois. Percentage interest in the 12 major areas were as follows: Preparation for marriage (61. 7), mental health (43. 9), personality and social (39. 6), exercise and fatigue (36. 5), personal (29. 4), alcohol, smoking, and drugs (23. 9), degenerative diseases (23. 4), nutrition (23. 1), communicable diseases (18. 6), vision, hearing, and teeth (15. 5), safety and first aid (14. 8), and community and professional (12. 3). Expressed student interest was appreciably greater in preparation-for-marriage and lesser in communicable-disease, vision-hearing--teeth, and first-aid-safety than the curriculum emphasis.

University of Illinois, Urbana, Illinois (A. W. Hubbard)

44. ABRAHAMS, Joseph. An Analysis and Projection of Recreation Services for the Illinois State Training School for Girls. M. S. in Recreation. 1961. 92 p. (C. K. Brightbill)

45. BARTH, Dorothy Ann. A Cinematographic Analysis of the Badminton Backhand Stroke. M. S. in Physical Education. 1961. 65 p. (O. G. Young)

46. BEAUCHESNE, Jean-Marc. Recommended Provincial Legislation for the Regulation of Public Bathing Areas and Facilities in Quebec, Canada. M. S. in Recreation. 1961. 82 p. (C. K. Brightbill)

47. BOSKIN, Warren D. A Study of Accidents and Injuries in College and University Physical Education Programs for Men. M. S. in Health Education. 1961. 58 p. (A. E. Florio)

48. BOSTWICK, William. The Effects of Weight Training on Speed and Endurance in Baseball Pitching. M. S. in Physical Education. 1961. 38 p. (A. W. Hubbard)

49. BUEHRER, Philip Richard. An Evaluation of the Professional Physical Education Programs of Four State Universities of Ohio. M. S. in Physical Education. 1961. 80 p. (C. O. Jackson)

50. CARRERA, Michael A. Teacher Preparation and Student Instruction Regarding Narcotics and Drug Addiction in New York Secondary Schools. M. S. in Health Education. 1961. 64 p. (F. E. Boys)

51. CUNDIFF, David E. The Progressive Changes in Certain Cardiovascular Measurements During a Season of Basketball. M. S. in Physical Education. 1961. 82 p. (T. K. Cureton, A. J. Barry)

52. EDWARDS, William A. An Analytical Survey of Selected Types of Non-conventional Play Equipment. M. S. in Recreation. 1961. 57 p. (C. K. Brightbill)

53. FANNING, William James. A Cinematographic and Mechanical Analysis and Comparative Study of the Catchers' Throw. M. S. in Physical Education. 1961. 130 p. (T. K. Cureton)

54. FABIAN, Tom. Case Studies of Selected Park and Recreation Bond

Issue Referenda in Illinois. M. S. in Recreation. 1961. 84 p. (C. K. Brightbill)

55. FISHER, Joseph Thomas. The Effect of General Progressive Strength Activities on the Upper Body Development of Selected Young Boys. M. S. in Physical Education. 1961. 54 p. (T. K. Cureton, A. J. Barry)

56. FREED, Richard Rubin. An Evaluation of the Undergraduate Professional Curriculum in Physical Education for Men of Four Institutions in New York State. M. S. in Physical Education. 1961. 83 p. (C. O. Jackson)

57. HALLBERG, David D. Factor Analysis of the Electrocardiogram. M. S. in Physical Education. 1961. 95 p. (T. K. Cureton)

58. HEMME, David G. The Effect of Driver Education on Emotional Maturity. M. S. in Health Education. 1961. 55 p. (A. E. Florio)

59. INABINETT, Virginia N. A Comparison of the Effectiveness of the Hook Ball and Straight Ball Deliveries for Beginning Bowlers. M. S. in Physical Education. 1961. 40 p. (O. E. Young)

60. KAPILIAN, Ralph H. Progressive Exercises for Adults Using Various Cardiovascular Indexes in Determining the Exertion of These Exercises. M. S. in Physical Education. 1961. 139 p. (T. K. Cureton)

61. KERTZER, Robert. The Motor Ability, Physical Activity Patterns, and Recreational Preferences of Obese School Children. M. S. in Health Education. 1961. 58 p. (G. B. Couch)

62. KNOWLTON, Ronald Gordon. A Ballistocardiographic Investigation of Cardiac Responses to Physical Training with a Select Group of Adult Males. Ph. D. in Physical Education. 1961. 157 p. (T. K. Cureton)

63. KRUGER, Karl K. A New Type Mechanical Switch - Electrical Counting Pedometer. M. S. in Health Education. 1961. 51 p. (F. E. Boys)

64. LARSON, Charles E. The Effects of Weight Training on the Upper Body Development of Young Boys. M. S. in Physical Education. 1961. 111 p. (T. K. Cureton)

65. LEARNER, Seymour. Measurement of the Degrees and Variations in the Tightness of First Aid Tourniquet Application. M. S. in Health Education. 1961. 73 p. (F. E. Boys)

66. LIU, Yan-Shu. Physical Fitness of Chinese (Taiwan), British, and United States Children. M. S. in Physical Education. 1961. 68 p. (A. W. Hubbard)

67. MALINAK, Nina R. The Construction of an Objective Measure of Accuracy in the Performance of the Tennis Serve. M. S. in Physical Education. 1961. 59 p. (O. G. Young)

68. McADAM, Janet R. A Comparison of Basal Metabolism and Radioiodine Uptake Determinations in Three Weight Groups. M. S. in Health Education. 1961. 50 p. (F. E. Boys)

69. McFARLAND, Robert W. An Evaluation of the Professional Physical Education Curriculum for Men in Five Church Affiliated Colleges of Nebraska. M. S. in Physical Education. 1961. 90 p. (C. O. Jackson)

70. MOORE, Asbury Cummings, Jr. Origins of Thirty-Three Sports. Ph. D. in Physical Education. 1961. 93 p. (S. C. Staley)

71. MORGAN, James H. A Study of the Recreation Needs and Interests of a Selected Neighborhood in Rockford Park District, Illinois. M. S. in Recreation. 1961. 76 p. (C. K. Brightbill)

72. NELSON, Esther R. A Recreation Survey of Washington, Illinois. M. S. in Recreation. 1961. 110 p. (A. V. Sapora)

73. OBRIECHT, Leo F. The Development of a Metrical System of Assessing the Body Type of Young Boys. M. S. in Physical Education. 1961. 112 p. (T. K. Cureton, A. J. Barry)

74. OLSON, Arvid R. A History of the Development of Square Dancing as a Recreational Activity in the State of Illinois from the Early 1940's to the Present. M. S. in Recreation. 1961. 77 p. (C. K. Brightbill)

75. PARCHMAN, Linda L. A Comparative Study of the Development of Leg Strength and Endurance of College Women in Basketball and Swimming. M. S. in Physical Education. 1961. 47 p. (O. G. Young)

76. PHILLIPS, Jack Lee. Homogeneous Grouping and Its Effects upon Learning in Volleyball. M. S. in Physical Education. 1961. 73 p. (H. E. Kenney)

77. POLLOCK, Micheal L. The Metabolic Cost of the Exercycle and Resistance Bicycle on Middle-Aged Women. M. S. in Physical Education. 1961. 71 p. (T. K. Cureton)

78. RETEL, Robert E. A Survey of Therapeutic Exercises Used in American Hospitals, Clinics, and Universities for Certain Common Disabilities. M. S. in Physical Education. 1961. 73 p. (H. E. Kenney)

79. ROTUNNO, Martin A. A Statistical Study To Examine the Amount of Knowledge Effected by Recreation Experiences in Music. M. S. in Recreation. 1961. 137 p. (A. V. Sapora)

80. RYAN, Roland L. The Effects of Twelve Weeks of Developmental Activities on Splanchnic Tone as Reflected in the Brachial Pulse Wave Decrements. M. S. in Physical Education. 1961. 64 p. (T. K. Cureton, A. J. Barry)

81. SMITH, Johanne M. An Experimental Study of Gross Motor Play Activities for Visually Handicapped Children. M. S. in Recreation. 1961. 131 p. (C. K. Brightbill)

82. SWANSON, Carolyn. Proportion of Time Spent in Physical Activity by University Women Students in Selected Physical Education Classes. M. S. in Physical Education. 1961. 43 p. (L. J. Huelster)

83. TAVANO, Donald C. Differences in Relaxation Achieved in a

Limited Day-Time Rest Period, Good Sleepers Versus Poor Sleepers. M.S. in Health Education. 1961. 50 p. (F. E. Boys)

84. WEBER, Herbert. Leisure in Modern Society as Viewed by Seventy Departmental Heads at the University of Illinois. M.S. in Recreation. 1961. 450 p. (A. V. Sapora)

85. WILLIAMS, Roger L. A Forced Choice Rating Scale for Coaches. M.S. in Physical Education. 1961. 49 p. (A. W. Hubbard)

86. WRIGHT, Owen Lee. The Effects of Training on the Physical Fitness of Adult Women. M.S. in Physical Education. 1961. 121 p. (T. K. Cureton)

87. ZIMMERMAN, Patricia A. The Relationship of Kinesthesis to High and Low Levels of Basketball Ability Among College Women. M.S. in Physical Education. 1961. 68 p. (O. G. Young)

Indiana University, Bloomington, Indiana (K. W. Bookwalter)

88. ABDOU, Kamal Saleh. Sports and Games in Ancient Egypt. P.E.D. 1961. 332 p. (M. C. Wakefield)

Each period included in the study was surveyed for its political and cultural aspects as well as studied for sports and games in ancient Egypt from prehistoric times until the birth of Christianity. The primary sources utilized were the paintings, sculptures, and articles pertaining to sports and games in the ancient monuments. Secondary sources were writings by those historians who participated in the excavations in Egypt and/or in translation and interpretation of hieroglyphic documents. A comparison was made between the ancient Egyptian and Greek sports and games with reference to their origin, objectives, and kinds. The Egyptians seem to have preserved most of their ancient sports and games throughout the ages in spite of the influence of various foreign cultural contacts and dominations.

89. ANNARINO, Anthony A. A Comparison of the Relative Effectiveness of Two Methods of Soccer Instruction. P.E.D. 1961. 157 p. (G. F. Cousins)

Measures of initial and final status in soccer skill ability and soccer knowledge were obtained for each of the students in the drill and game methods groups by the administration of a standardized soccer knowledge test for college men and a four-item soccer skill battery (volley, dribble, heading, and distance kick). No significant differences were found between the final measures for the game and drill groups in terms of soccer skill and knowledge except for heading ability. The game group was superior to the drill group in terms of heading ability. A correlation of .627 was found between the subjective and objective estimates of soccer ability. The correlation between the results of the objective tests of soccer skill and objective tests of soccer knowledge was insignificant.

90. BARNES, Alfred Cavis. Characteristics of Personality and Attitude Relationships of Selected Male Traffic Violators and Non-Violators. H.S.D. 1961. 185 p. (B. I. Loft)

The Johnson Temperament Analysis and the Iowa State College Driver Reaction Inventory were administered to 299 non-violators and 291 violators who were male students at Indiana University and Iowa State Teachers College. These men were of ages 20 through 24 years. Personal data were obtained also for each man in regard to year of birth, marital status, driving experience, approximate miles driven each year, formal education, high school driver education experience, accident involvement, violations, and point accumulation. The non-violator group scored higher on the self-mastery trait than did the violator group. In comparing non-violators and violators with six or more points, the violator group in each case scored higher than the non-violator group on the critical trait.

91. BRUCE, Patricia J. The Effects of Conscious Relaxation and a Floatation Device on Learning Beginning Swimming. P. E. D. 1961. 206 p. (M. P. Phillips, G. F. Cousins)

A random sample of freshman college women was divided randomly into four classes. Four combinations of method were possible with each class using or not using both of the two treatments. Information on the effects of the variables was secured by an analysis of variance of the criterion scores under a two-by-two factorial design. The criterion test yielded two measures: a time score and a rating score. The analysis of time scores showed no significant interaction, nor any significant differences between the use and non-use of conscious relaxation nor the use and non-use of a floatation device. Analysis of the rating scores showed neither a significant interaction nor significant difference between the use and non-use of conscious relaxation, but a significant difference was found in favor of non-use of a floatation device.

92. EVAUL, Thomas. The Effect of All Male, All Female, and Coeducational Classes on Skill Development in Badminton. P. E. D. 1961. 105 p. (K. W. Bookwalter)

Forty men were randomly assigned to an all-male class and two coeducational classes. Forty women were randomly assigned to an all-female class and two coeducational classes. A wall volley test was administered before the commencement of skill instruction to measure the initial status of each subject in badminton ability. All intergroup variables were controlled during the teaching of the classes. At the completion of the 16 lessons, tests of wrist volley, long serve, and short serve were administered. The final adjusted means revealed that women taught coeducationally did better on all three tests than those taught alone, while men taught alone were superior to those taught coeducationally on two of the three tests.

93. HALE, Sidney W. An Evaluation of Organization and Administrative Practices of Little League Baseball in the State of Ohio. P. E. D. 1961. 184 p. (G. F. Cousins)

A check list was formulated and distributed to 890 Little League Baseball managers. A similar check list was constructed so that a jury of experts could evaluate in terms of desirability the Little League practices as indicated from the results of the manager's replies. The lay people generally favored Little League Baseball, but professional organizations were skeptical of its desirability. Undesirable practices appeared in the areas of safety precautions, health examinations, accounting of funds, and technical training of managers.

94. HANAWALT, Dwight L. An Analysis and Evaluation of the Resident Camping Program of the Church of the Brethren. Rec. D. 1961. 194 p. (G. G. Eppley)

Twenty-two Brethren resident camps were visited and evaluated by the American Camping Association score card. The areas of health, safety, and administration were found to be considerably substandard. The program area met the standards. The author concluded that the score card should be revised to cope better with short-term camping and to provide more gradation in score.

95. JUTTEN, Jessie B. Implications for Teacher Education Developed

Through a Job Analysis of Women Physical Education Teachers in Selected Senior High Schools in Missouri. P.E.D. 1960. 199 p. (M. P. Phillips, K. W. Bookwalter)

A check list was formulated and administered in personal interviews with 100 physical education teachers of senior high school girls. Duties and activities receiving a high rating in importance were checked as to the reason for nonperformance. Duties and activities receiving a high rating in difficulty were checked as to the reason for difficulty. Duties of considerable and extreme difficulty were examined in relation to school size, experience of teacher, and training of teacher. Duties found to be of extreme importance and highest difficulty were: determining student needs and interests, interpreting desirable attitudes and appreciations, counseling students, correcting faulty performance, and promoting good behavioral patterns.

96. McILROY, Jane S. An Evaluation of the Physical Education Programs for Women in Selected Institutions of Higher Learning in Three Northwest States. P.E.D. 1961. 351 p. (M. P. Phillips, K. W. Bookwalter)

Twenty-two institutions were selected and the status of their programs was determined by the use of a score card. The institutions were found to be particularly weak in the areas of facilities and evaluation. The service program, instruction, and equipment and supplies were comparatively strong. The state-supported institutions met standards better than did the private institutions in all areas except the extramural programs. The score card was found to be a usable tool for determining the status of the college women's physical education program. The score and interval reliability coefficient was .98-.99 and the objectivity coefficients ranged from .58 to .90. The validity of the score card was based upon the acceptability of the standards by 16 qualified professional women.

97. WILSON, George T. An Analysis of Effective Practices Employed To Reduce Vandalism in Park, Recreation, and Combined Departments in American Cities of Over 50,000 Population. Rec.D. 1961. 256 p. (G. G. Eppley)

A pilot study was made to determine the instrument for investigation which, in the final form, was approved by a jury of representatives of the nation. Park and recreation personnel were requested to list practices which had proved effective in reducing vandalism. An adaptation of the critical-incident technique was used. The findings of the study indicate that vandalism may be minimized by such measures as: employing principles of good design, planning, and construction; institution preventive maintenance procedures and programs of immediate repair or replacement; patroling; adequate lighting; and working closely with community agencies.

State University of Iowa, Iowa City, Iowa (L. E. Alley and D. R. Mohr)

98. BALL, Jerry R. The Effect of Selected Time Intervals Between Eating and Swimming on Performance in the 100-Yard Freestyle Swim. Ph.D. 1961. 41 p. (L. E. Alley)

99. BROCKWAY, David L. The Effectiveness of Floatation Aids in the Teaching of Beginning Swimming. M.A. in Physical Education. 1961. 19 p. (L. E. Alley)

100. CAMPNEY, Harry K., Jr. The Work Required to Produce Changes in Cardiovascular Fitness. Ph.D. 1961. 146 p. (A. J. Wendler)

101. CONWAY, Darrell E. Injuries Incurred in Interscholastic Football in Iowa. M.A. in Physical Education. 1961. 29 p. (Gene M. Asprey)

102. DOHRMANN, Paul F. Throwing- and Kicking-Ability of Eight-Year-Old Boys and Girls. Ph.D. 1961. 72 p. (L. E. Alley)

103. EISCHEID, Everett E. A Comparison of Undergraduate Programs Established for Majors in Health and Physical Education at Twenty-one Colleges and Universities in Iowa. M.A. in Physical Education. 1961. 109 p. (L. E. Alley, G. T. Bresnahan)

104. IKEDA, Namiko. A Comparison of Physical Fitness of Children in Iowa, U. S. A., and Tokyo, Japan. Ph.D. 1961. 82 p. (M. G. Scott)

A physical fitness test battery, including sit-ups, standing broad jump, shuttle run, forward bend, dash, grasshopper, and bent-arm hang for girls and pull-ups for boys, was administered to 172 girls and 178 boys in Iowa and 221 girls and 174 boys in Tokyo, ranging in age from 9 to 12 years. Height, weight, knee-finger length, and leg length were recorded. Subjects were drawn from various sized towns and from situations as similar as possible. A two-factor (race and age) analysis of variance was used. The two samples were homogeneous in age, except for 9-year-old boys and girls. The Iowa boys and girls were taller, heavier, and had longer legs than the Japanese. Except for sit-ups, the Japanese groups exceeded the Iowa groups in all fitness tests. Age seemed to have no effect on performance in the bent-arm and sit-ups for girls, the forward bend for boys, and the grasshopper for both sexes. Negative correlations were found between forward bend and finger-knee length, forward bend and leg length, bent-arm hang and weight, pull-ups and weight, and the weight/height ratio and sit-ups. Dash and leg length, and the weight/height ratio and forward bend were positively correlated. The correlations between these items were not absolutely consistent, but the two groups showed similar patterns of growth and performance. A check list showed that the Japanese children had more chance for activity in physical education classes although the classes were larger and the facilities less desirable.

105. KAMOZUT, Guzey F. The Relationship of Flexibility at the Ankle Joint to Ankle Injuries Among College Women. M.A. in Physical Education. 1961. 78 p. (M. Fox)

A preliminary study on 50 normal subjects, using a gravity goniometer, showed a high correlation between right and left ankle and tarsal joint flexibility under weight-bearing and nonweight-bearing conditions. Weight-bearing conditions were more reliable than nonweight-bearing, and dorsal flexion movements were more reliable than pronation and supination. Flexibility measurements were also made on 50 subjects with previous ankle sprains. Factors such as recency, severity, and recurrence were covered by questionnaire. The injured subjects showed low correlations between right and left ankle measurements, especially in dorsal flexion. In comparing the injured and normal groups, losses significant at the 2 percent level were found especially in the weight-bearing condition and in the more recent injuries.

106. KERBER, Paul E. Attitudes of Senior College Students Toward Physical Education. M.A. in Physical Education. 1961. 67 p. (D. R. Casady)

107. KNEIP, Marguerite. A Classification of Basic Golf Swing Errors for Instructional Purposes. M.A. in Physical Education. 1961. 97 p. (J. Homewood, G. Scott)

Information from a survey of golf literature, observation of films and women golfers in class, and interviews with golf instructors were used in constructing a guide for golf instructors that would facilitate the detection and correction of errors made by inexperienced women golfers. Subproblems were to describe the basic golf swing, to determine which movements were erroneous, and to classify these errors. Specific errors seemed to fall into several categories of key errors. Certain errors tended to coexist and form error patterns. Errors in the earlier stages of the swing tended to cause errors in the later stages. Lifting the club or failing to produce action at the start of the backswing was the most common basic error.

108. KNIERIM, Helen. The Construction of an Instructional Filmstrip on Selected Campcraft Skills. M. A. in Recreation. 1961. 77 p. (B. van der Smissen)

A 60-frame filmstrip in color with a narrative record was prepared on the selection, erection, and construction of tents and temporary shelters. An instructor's guide with black and white pictures, the narrative, and supplemental teaching aids was also prepared. A tarp or poncho is shown pitched as a lean-to, "A," one-peak, McKinstry or Hickory tent, and a lean-to over a canoe. Selection in terms of use, durability, and ease in carrying, pitching, and striking is discussed. Pup, explorer, Baker, alpine and wall tents are illustrated along with support by one pole, two sheer poles, and suspension from a tree. Pitching tents with and without sewn-in floors, trenching, use of sod cloths, and mosquito netting, and the construction of a wall tent are included. The materials are available from The Athletic Institute and the American Camping Association.

109. KUESTER, Kenneth D. A Comparison of the Effectiveness of Static and Concentric Weight-Training Methods in the Development of Muscular Endurance. M. A. in Physical Education. 1961. 38 p. (A. J. Wendler)

110. LENGUADORO, James R. The Relationship Between the Time Taken To Execute Free Throws and Success in Free-Throw Shooting in Basketball. M. A. in Physical Education. 1961. 26 p. (L. E. Alley, R. F. Williams)

111. LYONS, Marjory D. Analysis of Health Knowledge of College Women. Ph. D. 1961. 94 p. (M. G. Scott)

A general health knowledge test with 54 multiple choice items was constructed, tried, and refined. A pre- and post-test of 103 students showed a significant increase in knowledge from a course in health education. Single tests of 1583 students taking health courses in the Associated Colleges of the Midwest, Oberlin College, and the State University of Iowa showed that sophomore women were significantly better than sophomore men and freshman women, and that freshman women were significantly above freshman men, but that freshman and sophomore men did not differ significantly. The revised General Health Knowledge Test appeared to provide a valid measure of health knowledge and understanding for women in liberal arts colleges in the Midwest.

112. MEDITCH, Carl. Effectiveness of Two Methods of Weight-Training for Children with Athetoid Type of Cerebral Palsy. M. A. in Physical Education. 1961. 19 p. (G. M. Asprey, R. R. Rembolt)

113. MERRITT, Myrtle. The Relationships of Selected Physical, Mental, Emotional and Social Factors to the Recreational Preferences

of College Women. Ph. D. 1961. (B. van der Smissen)

Data from two colleges for 780 and 464 women were treated separately. Total preferences in 10 recreational areas, together with size of home town and high school, the student's vocational choice, recreation participation in high school, and amount of and attitude toward high school physical education, the parents' religion and participation in recreation, and the father's occupation, were ascertained by a check list. Direct testing gave four cluster and 18 scale scores for the California Psychological Inventory, total score of three subtests for the MacQuarrie Test of Mechanical Ability, weight deviation from Pryor norms, and the Scott Motor Ability composite score. Relations similar in both colleges and significant at the 1 percent level were found between poise, ascendancy, and self-assurance with preference for drama, oratory, and musical activities, for socialization, maturity, and responsibility with preference for voluntary and musical activities, and for dominance, good impression, capacity for status, and sociability with liking for noncompetitive activities. Motor ability and amount of recreational participation were related to preferences in games, sports, and competition. Religious background was associated with outdoor recreational preferences, and vocational choice influenced interest in voluntary activities. Other significant results were ascertained but were not consistent in both schools.

114. PENNYBAKER, Dale A. An Investigation of Speed of Movement. Ph. D. 1961. 115 p. (L. E. Alley, H. P. Bechtoldt)

115. POLLEI, Linda M. An Identification of the Status of Physical Education Relevant to the High School Guidance Counselor. M. A. in Physical Education. 1961. 68 p. (G. Scott)

An "opinionnaire" to determine the high school counselor's "image" of physical education as a profession for women, the high school physical education program, and the woman physical educator was sent to 60 randomly selected counselors in each of four states: Iowa, Minnesota, Illinois, and Wisconsin. Anonymous returns including supplemental information concerning educational background and experience were received from 77 percent. The results indicated that these counselors had a favorable attitude toward physical education but not as an academic pursuit, that physical education was not meeting its educational responsibilities, that they believe parents consider physical education an unsuitable career for their daughters, and that the counselors would encourage a girl to enter the profession if she expressed a desire and had the ability.

116. READE, Robert D. The Effects of Weight Training on Starting Speed in Football. M. A. in Physical Education. 1961. 32 p. (L. E. Alley)

117. ROGERS, Robert J. A Comparison of Opinions Regarding United States Football Rules and Canadian Football Rules. M. A. in Physical Education. 1961. 105 p. (R. D. Hoff)

118. SPRAGUE, Ann L. The Relationship Between Selected Measures of Expressive Language and Motor Skill in Eight-Year-Old Boys. Ph. D. 1961. 202 p. (M. G. Scott, F. L. Darley)

Sixty-two physically normal, 8-year-old white boys averaging 95.5 months with monolingual homes, siblings, IQ above 80, and normal hearing were tested on: height, weight, shuttle run, repeated wall volley, stick balance, and standing broad jump together with modified Minnesota Rate of Manipulation, audiometer sweep-check, Ammons Full-Range Picture Vocabulary Test, Templin 50-item Screening Test of Articulation, elicitation of connected speech, and four oral diacochokinesis measures (alternation rate of tongue, lips, and jaw). Height and weight were highly related. The motor skills showed intercorrelations significant beyond the 5 percent level with higher correlations between similar skills, but none were high enough to warrant substitution of one for the other or using one as an index of general motor performance. Intercorrelations between expressive language skills were generally quite high and higher than between motor skills, but no single measure seemed suitable as an index of language development. The highest correlations (significant beyond 1 percent level) occurred between oral diadochokinetic rates and manipulation. Intelligence correlated positively with "fine" motor skills, with some measures of verbalization, and oral diadochokinesis, but essentially zero with "gross" motor skills. Socio-economic status was positively related to level of articulatory skill, oral diadochokinesis, and "fine" motor coordination, but essentially zero with "gross" motor skill.

119. STRONG, Clinton H. Motivation Related to Performance of Physical-Fitness Tests. Ph. D. 1961. 172 p. (L. E. Alley, J. B. Stroud)

120. TCHENG, Tse-Kia. Physical Fitness of Chinese and American Boys and Girls Ten to Eighteen Years of Age. M.A. in Physical Education. 1961. 92 p. (A. J. Wendler)

121. TOMANEK, Robert J. The Effects of Stair Climbing on Pulse Rate and Blood Pressure. M.A. in Physical Education. 1960. 48 p. (A. J. Wendler)

122. VALENTINE, James C. Mechanical Analysis of Selected Leg Maneuvers in Wrestling. M.A. in Physical Education. 1961. 61 p. (L. E. Alley)

123. VICKERY, Byron L. Flexibility of Negro and White Athletes. M.A. in Physical Education. 1961. 21 p. (G. M. Asprey)

124. WALKER, Thomas E. A Survey of Attitudes Toward Spring Football Practice. M.A. in Physical Education. 1961. 53 p. (A. J. Wendler)

125. WATKINS, David L. Motion Pictures as an Aid in Correcting Baseball Batting Faults. M.A. in Physical Education. 1961. 31 p. (O. H. Vogel, D. R. Casady)

University of Maryland, College Park, Maryland (G. Lawther)

126. BEVINGTON, Lloyd. A Comparative Study of the Effect of Two Selected Broad Jumping Forms upon Improvement of Novice Jumpers. M.A. in Physical Education. 1961. 50 p. (J. H. Humphrey)

Sixty-seven male college students—all novice jumpers—acted as subjects. Their performances in the running broad jump relative to two different forms, the "float" and the "step" techniques, were compared. The writer concluded that the "float" form seemed more advisable for teaching beginners to broad jump.

127. BREADY, Charles Frank, Jr. A Study of the Effects of Heavy Resistance upon the Pattern of Muscular Development as Indicated by Strength, Endurance, and Girth of the Right Elbow Flexors. M.A. in Physical Education. 1961. 110 p. (M. H. Eyler)

The effects of heavy resistance weight training of the pattern of muscular development, as indicated by strength, girth, and endurance measures of the right elbow flexors, were studied using as subjects 34 grade

7 students. It was found that heavy resistance exercises did produce significant increases in size, strength, and endurance of the right elbow flexors.

128. CALE, Audrey Arlene. The Investigation and Analysis of Softball Skill Tests for College Women. M.A. in Physical Education. 1961. 68 p. (D. R. Mohr)

One hundred women students, selected from the required program of physical education at the University of Maryland, acted as subjects for this study. The purpose was to investigate and analyze softball skill tests for college women. The Repeated Throws Test, the Distance Throw Test, and the Batting Tee Test were found to be the most practical measuring tools of softball playing ability.

129. COUTTS, Curtis Alan. The Effects of Music on Pulse Rates and Work Output of Short Duration. M.A. in Physical Education. 1961. 62 p. (F. F. Husman)

This study was undertaken to discover what effect music has upon pulse rate and upon output of short duration. Fifteen male students of the University of Maryland served as subjects. There was no consistent pattern to indicate significant changes in pulse rate or work output resulting from the music presentation.

130. GERNAND, George Harry. A Contemporary Study of the Professional Status of the High School Coach in the State of Maryland. M.A. in Physical Education. 1961. 78 p. (B. F. Husman)

The professional status of the interscholastic coach in the state of Maryland was analyzed by means of a questionnaire survey. It was found that: (1) a majority of the coaches in Maryland have a background in physical education and athletics; (2) the demands of the teacher-coach position, in terms of time and effort, tend to discourage additional education and professional advancement; (3) the coach, in most cases, receives no additional remuneration for coaching; (4) most coaches feel a certain added prestige with students and community which is attributed to their positions as coaches.

131. HERZSTEIN, Joseph Norman. A Comparison of the Jumping of American Negro Male College Students with American White Male College Students as Measured by the Sargent Vertical Jump Test. 1961. 38 p. (B. F. Husman)

White male college students totaling 226 were compared with 156 Negro male college students in their performance on the Sargent Vertical Jump Test. The mean of the Negro students was found to be significantly higher than the mean of the white students on this test.

132. ISON, Charles Fletcher. An Experimental Study of a Comparison of the Use of Physical Education Activities as a Learning Medium with Traditional Teaching Procedures in the Development of Selected Fifth-Grade Science Concepts. M.A. in Physical Education. 1961. 58 p. (J. H. Humphrey)

It was concluded that both traditional procedures and physical education activities can provide valid learning experiences for teaching the selected science concepts.

133. JACKSON, Robert Hyde. An Analysis of the Interrelationships of a Series of Recommended Agility Tests. M.A. in Physical Education. 1961. 91 p. (B. H. Massey)

Analysis of 15 commonly used agility tests indicated that the term agility as applied in physical education and as reflected in the standardized tests does not have a standard, workable definition; that none of the tests were reliable enough to be administered only once; that none of the correlations between tests were high because of marked discrepancies in the movements involved; that accurate measurement of individual agility was impossible because of inconsistencies in definition and measurement; and that running seemed more dominant in many tests than other movements involving agility.

134. KAHNERT, John Herman. An Exhaustive Annotated and Cross-Indexed Bibliography of Periodical Literature on Heavy Resistive Exercise Published in the United States from 1950 Through 1960. M. A. in Physical Education. 1961. 99 p. (M. H. Eyler)

135. MYERS, Helen Baird. A Survey of Volunteer Junior Leader Programs in 156 Recreation Departments in the United States. M. A. in Recreation. 1961. 53 p. (E. E. Harvey)

A questionnaire survey of 156 recreation departments in the United States was made for the purpose of determining the number and nature of junior leader programs employed. The investigation concerned recruiting and qualifications, length of service and hours of work, training, duties and responsibilities, meetings, organizational pattern, compensation, and laws relative to employment.

136. SCHROEDER, Alfred William. The Relationship Between the Muscular Fitness and School Adjustment of Ninth Grade Male Students. M. A. in Physical Education. 1961. 62 p. (B. H. Massey)

Sixty-seven grade 9 boys were classified as high, average, or low in scholastic achievement. Muscular fitness of subjects was measured by a composite score resulting from performances on squat thrusts, pull-ups, sit-ups, and vertical jump tests. School adjustment was measured by IQ, grade point average, scores obtained on the Iowa Test of Basic Skills, peer acceptance, and teacher evaluation of classroom adjustment. The relationship between muscular fitness and school adjustment as measured was not significant for any of the three groups.

137. SCHULZ, Louise Elizabeth. Relationships Between Body Image and Physical Performance in Adolescent Girls. M. A. in Physical Education. 1961. 45 p. (D. R. Mohr)

138. SIMMERS, Paul R. The Relationship of an Intelligence Quotient Score and a Reading Achievement Score to a Motor Educability Score of Seventh Grade Boys. M. A. in Physical Education. 1961. 34 p. (J. H. Humphrey)

The Metheny revision of the Johnson Test of motor educability was administered to 98 grade 7 boys. These scores were correlated with the subjects' IQ as measured by the California Short-Form Test of Mental Maturity and reading achievement as measured by the Gates Reading Survey Test. Little relationship was found between the scores on the motor educability test and either the IQ test or the reading achievement test.

139. WHARTON, Margaret H. An Investigation of the Youth Fitness Test as a Predictive Measure of Skill Development in Field Hockey. M. A. in Physical Education. 1961. 55 p. (D. R. Mohr)

The AAHPER Youth Fitness Test was studied as a predictor of skill development in field hockey. One hundred and seven senior high school girls who had no previous field hockey training were used as subjects. A significant relationship was found between the scores on the Youth Fitness Test and field hockey achievement as measured by the Schmithals-French Field Hockey Achievement Tests.

140. WITTEN, Charles X. A Study of the Effects of Treadmill Training

upon the Brachial Sphygmogram as Measured by the Twin-Visco Recorder with the Infraton Attachment. M. A. in Physical Education. 1961. 50 p. (B. H. Massey)

The effect of a seven-week treadmill training period upon the brachial sphygmogram was studied with particular emphasis on the systolic amplitude. Diastolic amplitude, pulse rate, pulse pressure, and Five Minute Step Test scores were also studied. Significant increases in systolic amplitude and diastolic amplitude and a significant decrease in pulse rate were found in the experimental group. No significant changes were found in the control group, and no significant differences were found between the control and experimental groups.

141. ZIGROSSI, Norman A. An Analysis of the Relationship Between Visual Performance and the Batting and Slugging Average of College Baseball Players. M. A. in Physical Education. 1961. 45 p. (B. F. Husman)

A battery of 20 tests was administered by a practicing optometrist to determine a visual performance score for each of 11 college baseball players. The batting averages and slugging averages of the players were then correlated with their visual performance scores. No significant relationship was found between the visual performance scores and either the batting average or the slugging average.

University of Michigan, Ann Arbor, Michigan (E. F. Zeigler)

142. BOS, Ronald R. An Analysis of the Youth Fitness Project Data and a Comparison of These Data with Comparable Data Recorded to 1940. Ph. D. 1961. (P. Hunsicker)

Performances of U. S. children in Grades 5 through 12 were summarized and compared to various pre-1940 test results from similar groups. Boys' performances by age in pull-ups, sit-ups, standing broad jump, and 50-yard dash were essentially similar. Present mean performance for boys based on the Classification Index was inferior in pull-ups, standing broad jump, and 50-yard dash to performance reported in three studies conducted in California, with the major discrepancies at the elementary and junior high level rather than the senior high level. Present girls' performances in the 50-yard dash and standing broad jump were essentially similar to pre-1940 performances except that the present older girls compared less favorably than the younger. Present girls' performances in the sit-ups were markedly inferior. Present girls' performances in the 50-yard dash on the basis of the Classification Index were poorer than those in the "California Studies."

143. FRINGER, Margaret. A Battery of Softball Skill Tests for Senior High School Girls. M. A. in Physical Education. 1961. (K. Luttgens)

144. IVES, Charlotte Yale. Perceptions of Prospective Elementary Teachers Regarding Their Preparation in Health Education. Ph. D. 1961. (M. Rugen)

Two groups of prospective elementary teachers differing in two types of health course requirements current in teachers colleges were studied to determine whether the group with a professional health course differed in perceptions of recommended health education experience, in ability to suggest improvements in their preparation for health education, and in ability to identify deficiencies and suggest improvements. Students with a professional health education course had significantly greater numbers of and knowledge about experiences, feelings of adequate preparation, suggestions for improving courses, methods, and experiences, greater awareness of good methods, and a more favorable attitude toward the survey. On the other hand, one-fourth of the students without a professional health course recommended it as a curricular improvement for learning three-fourths of the experience items.

145. JERVEY, Annie Arden. A Study of the Flexibility of Selected Joints in Specified Groups of Adult Females. Ph.D. 1961. (P. Hunsicker)

Groups of women from 18 to 74 years of age were measured in height, weight, and 14 flexibilities. Flexibility was highest in most joints at 25-29 years. Among inactive women, flexibility decreased with age in all joints tested except for an increase in radio-ulnar pronation, and the correlation was significant for radio-ulnar supination, ankle plantar flexion, shoulder extension, flexion, and outward rotation, and hip flexion. The correlation of age with flexibility was significant for active women in trunk flexion, shoulder extension, and radio-ulnar pronation. Active women were more flexible than inactive women in ankle dorsi-flexion, shoulder extension, and shoulder outward rotation.

146. KOZAR, Andrew Joseph. A Study of Telemetered Heart Rate During Sports Participation of Young Adult Men. Ph.D. 1961. (P. Hunsicker)

Heart rate during the rope climb and during participation in handball, paddleball, tennis, badminton, volleyball, and bowling was possible by telemetering. All subjects showed significant increases during activity. The average anticipatory heart rate increase was 40 per cent of the total increase in the activity, supporting Rushmer's theory of anticipatory acceleration unassociated with energy expenditure. Mean heart rates for sports activities differed significantly (except for the hyphenated group) in this order: paddleball, handball-tennis-badminton, volleyball, and bowling. Peak heart rates in badminton, handball, paddleball, and tennis did not differ significantly from each other but did differ significantly from volleyball and bowling, with bowling have the lowest peak rate.

147. LINN, George William. An Exploratory Comparison of the Personal Social Adjustment of Selected Participants and Nonparticipants in Two Junior High School Athletic Programs. Ph.D. 1961. (P. Hunsicker)

148. LOHRFINK, John H. A Survey of Secondary School Health Education Practices in the State of Michigan. M.A. in Physical Education. 1961. (P. Hunsicker)

149. MURPHY, Chester Walter. A Study of Tensiometer Strength in Boys Six to Eleven Years of Age. Ed.D. 1961. (P. Hunsicker)

Cable tensiometer strength tests of elbow, shoulder, and hip flexion and extension, knee extension, and total strength (sum of all) were administered to 657 elementary school boys ranging in age from 6 to 11 in Minneapolis-St. Paul. Strength increased irregularly with age and height. The percentage contributions of the various muscle groups fluctuated slightly through the age and height levels. The five weakest and the five strongest boys conformed to the total group pattern both in strength and in percentage contribution of the muscle groups.

150. ZUFFELATO, Robert. A Survey of Recreational Therapy Programs in the Bi-County Hospital Recreation League of Michigan. M.A. in Physical Education. 1961. (P. Hunsicker)

University of Minnesota, Minneapolis,14, Minnesota (E. E. Stish)

151. DOWNEY, Arthur J. Predicting the Potential Ability of High School Boys for Competitive Swimming. M.A. in Physical Education.

1961. 54 p. (W. Heusner)

152. NOVAK, Ladislav P. Minimum Muscular Fitness of New Zealand Children Compared with Minimum Muscular Fitness of Children from Other Countries as Measured by the Kraus-Weber Test. M. A. in Physical Education. 1960. 65 p. (W. Heusner)

New York University, New York 3, N. Y. (R. A. Weiss)

153. ANDERSON, Gordon W. An Evaluation of the Coordination Status of Health Programs in and Among Eight Selected Central Schools of Broome County, New York. Ed. D. 1961. (H. F. Kilander)

The coordination of health programs of schools in Broome County, New York, was evaluated on the basis of principles and opportunities for coordination on an intra- and inter-group and school basis. Groups involved were teachers of health, school nurses, dental hygienists, cafeteria personnel, custodians, psychologists, bus drivers, administrators, and health agencies. Check lists were used in individual and group interviews with representative personnel. Weaknesses in intra- and inter-school communication produced generally poor coordination. Recommendations were made.

154. GRIFFIN, James Morgan. A Comparative Study of Two Methods of Training in Track: The Conventional Method and the Interval Method. Ed. D. 1961. (R. Brown, Jr.)

Twenty young men, age 17-24, were paired on the basis of time in the 440-yard dash, experience in races involving pace, and ponderal index. The subjects were assigned randomly to groups for nine weeks of training with a test in the 440-yard dash each week. Analysis of variance and the t test showed no significant differences between the conventional and interval methods of training on any of the tests. Significant differences were found in both groups between successive trials during the early stages and again about the middle of training.

155. MONTAGUE, Mary Ella. A Study of the Effects of Dance Experiences upon Observable Behaviors of Women Prisoners. Ed. D. 1961. (G. Andrews)

The behavior of 24 women prisoners was studied before, during, and after four and one-half months of participation in dance on the basis of evidence concerning health, personality, and adjustment obtained from prison records, the prison nurse, psychologist, officers, and inmates. The Minnesota Personality Inventory was administered before and after participation in dance. Three skilled observers verified the findings concerning the inmates' response to dance participation in terms of participation, listening to and following directions, movement skill, and relations with others. Individual case studies were made and seemed to indicate a reduction in complaints necessitating consultation with the prison nurse and physician, a reduction in inmates' reports of tension and resentment of authority, a reduction in hostility, aggression, suspicion, and negativism, and improvement in dance ability.

156. NATHANS, Alan A. Program Planning in Private Camps. Ed. D. 1961. (M. A. Gabrielsen)

The 17 basic needs of camp-age children were determined and arranged according to age groups. These needs were converted to criteria and subdivided into four validated categories: social, emotional, physical and health, and educational. The criteria under each of these categories were further subdivided to a total of 86. The activities of private camps were examined and related to the criteria. Principles of program planning were developed for varying age groups. The results indicated that principles of program planning for private camps require varying emphases based on the special demands of the varying age groups. Programs in private camps tend to follow pragmatic bases.

157. PECHAR, Stanley Frank. A Study of the Nature, Frequency, and Related Personal Administrative Factors of Physical Education Accidents Among Boys in the Junior and High Schools of New York State. Ed.D. 1961. (R. Brown)

A survey of secondary school physical education accidents among boys was undertaken to determine the nature, frequency, and contributing personal and administrative factors. A total of 96 schools participated in the study for a period of ten months. Data on the nature of each accident were categorized and ranked according to the number and percentage of accidents by activity. The contributing factors were tabulated by activity and by grade. Reported were 1408 accidents, with most of them occurring in football, on the athletic field, and during practice for interschool competition. The contributing factors were more frequently personal than administrative. On the basis of the findings and a review of the literature, 44 principles for the safe conduct of physical education programs were proposed.

158. WEST, Eula Lee. The Role of Women in the American Society with Implications for the Professional Preparation of Women for Teaching Physical Education in College. Ph.D. 1961. (M. Fields)

Data from authoritative literature were analyzed and synthesized into statements which showed the complete picture of the role of women in American society. By analysis of the relationship of the goals of general education for college women and the role of women, inferences were drawn for the general education of college women. The basic concepts inherent within these inferences were analyzed and interpreted in relation to physical education, and appropriate objectives of physical education for college women were established. From these objectives, competencies needed by physical education teachers of college women were developed by logical induction. Thus, the direction that professional physical education for women should take in order to be consistent with the concepts of women in American society and with general education in higher education was established.

Northern Illinois University, DeKalb, Illinois (W. Healey)

159. CARLINI, Richard E. The Development and Evaluation of a New Design for a Football Helmet. M.S. in Education (P.E.) 1961. 23 p. (F. Stroup)

160. COHN, Arnold. An Analysis and Comparison of the Wedeln and Arlberg Skiing Movements. M.S. in Education (P.E.) 1961. 61 p. (R. E. McAdam)

161. DONAHUE, Robert M. The Effect of Systematic Weight Training on Basketball Performance. M.S. in Education (P.E.) 1961. 27 p. (M. E. Dean)

162. ESLER, Edward Francis. A Proposed Physical Education Program for Sixth, Seventh, and Eighth Grade Boys at Creston Community Consolidated School. M.S. in Education (P.E.) 1961. 82 p. (M. E. Dean)

163. FARRIS, Righter Steele. The Trend of Gymnastics in the Illinois

High Schools Since 1924. M.S. in Education (P.E.) 1961. 43 p. (R. E. McAdam)

164. FLANIGAN, Thomas E. A Survey of Free and Inexpensive Learning Materials Related to Health, Physical Education and Recreation. M.S. in Education (P.E.) 1961. 59 p. (R. E. McAdam)

165. FUNSTON, Robert G. A Survey To Ascertain the Kind and Amount of Weight Training Used by Participants in the 1960-61 Illinois State Wrestling Tournament. M.S. in Education (P.E.) 1961. 40 p. (F. Stroup)

166. GEORGE, Elias Jr. A Study of the Attitudes and Opinions of Illinois High School Wrestling Coaches Regarding the Inter-Scholastic Weight Control Plan. M.S. in Education (P.E.) 1961. 78 p. (F. Stroup)

167. GROSSHUESCH, Calvin W. Present Occupations of Physical Education Majors Graduated from Northern Illinois University Between 1956-1960. M.S. in Education (P.E.) 1961. 48 p. (D. Black)

168. HANSEN, Jack L. An Experimental Study To Determine the Relative Effectiveness of Two Methods of Teaching Volleyball to Boys in the Fifth and Sixth Grades. M.S. in Education (P.E.) 1961. 46 p. (F. Stroup)

169. HELMS, Glen Edward. Analysis of State Control of Junior High School Interscholastic Athletic Competition in the United States. M.S. in Education (P.E.) 1961. 49 p. (R. E. McAdam)

170. HENSON, Harold L. Syllabus of Wrestling Lead Up and Take Down Drills. M.S. in Education (P.E.) 1961. 73 p. (D. Black)

171. KALLEM, Donald Edward. The Effect of Weight Training on Jumping Ability. M.S. in Education (P.E.) 1961. 32 p. (R. E. McAdam)

172. KLEEMAN, Thomas J. Survey of the Physical Education Programs in Chicago Catholic Grammar Schools and a Comparison with Standard Recommended Programs. M.S. in Education (P.E.) 1961. 37 p. (W. Healey)

173. LEWIS, Joe B. An Analysis of Various Defensive and Offensive Skills in Baseball. M.S. in Education (P.E.) 1961. 65 p. (M. E. Dean)

174. MORELAND, Ronald James. A Comparison of Two Techniques of Base-Running in Baseball. M.S. in Education (P.E.) 1961. 40 p. (D. Black)

175. NORTH, Roland Jay. A Comparison of Two Methods of Teaching Volleyball to Male College Students. M.S. in Education (P.E.) 1961. 50 p. (M. E. Dean)

176. PITTMAN, Robert Eugene. The "Variable" Run vs. the "Steady-Pace" in the 440-Yard Run. M.S. in Education (P.E.) 1961. 59 p. (D. Black)

177. TOMAN, James Leo. The Adapted Physical Education Program: A Study of Administrative Policies and Criteria Used in Estab-

lishing Adapted Physical Education Programs in Selected High Schools of Northern Illinois. M. S. in Education (P. E.) 1961. 49 p. (R. E. McAdam)

178. WALLACE, Robert, Jr. The Three-Second Rule in High School Basketball. M. S. in Education (P. E.) 1961. 45 p. (M. E. Dean)

179. WILLIAMS, John Richard. The Effect of the Wealth of the School Districts on the Boys' Physical Education Programs in DeKalb County, Illinois. M. S. in Education (P. E.) 1961. 43 p. (W. Healey)

180. WILSON, John Edward. A Survey of the Classification of Students for Physical Education Classes in Northern Illinois High Schools. M. S. in Education. (P. E.) 1961. 27 p. (W. Healey)

Ohio State University, Columbus 10, Ohio (D. K. Mathews)

181. BARTELS, Robert Louis. A Comparison of Anatomical and Physiological Dead Space During Hyperventilation and Exercise. Ph. D. 1961. 57 p. (L. A. Hess)

182. CAMAIONE, David Norman. A Statistical Comparison of Vital Capacity and Flexibility Among Various Sport Groups. M. A. in Physical Education. 1961. (W. P. Ashbrook)

183. CONLY, Dale Leonard. The Status of Intercollegiate Soccer. M. A. in Physical Education. 1960. 106 p. (B. Bennett)

184. DAUGHERTY, William Boyer. A Proposed Adapted Sports Program for the Ohio Rehabilitation Center. M. A. in Health and Physical Education. 1961. 114 p. (W. Ashbrook)

185. FOX, Edward Lyle. An Analysis of Speed and Energy Expenditure of Two Swimming Turns. M. A. in Physical Education. 1961. 27 p. (D. Mathews)

186. GRIFFITH, Malcolm Anstett. An Objective Method for Evaluating Ability in Handball Singles. M. A. in Physical Education. 1960. 47 p. (B. Bennett)

187. GUERRERA, William Joseph. The Predictability of the Hook, Slice and Straight Golf Shot by Knowing the Path of the Clubhead Through the Ball. M. A. in Physical Education. 1961. (B. Bennett)

188. HODORY, Evelyn Booth. An Evaluation of the Effectiveness of a Tenth Grade Health Course Based on Health Knowledge Gained and Retained. M. A. in Health Education. 1961. (E. Sliepcevich)

189. HOLLAND, Robert Lewis. An Evaluation of the Physical Education Program for Boys in the Junior High Schools of Springfield, Ohio. M. A. in Physical Education. 1960. 105 p. (W. Ashbrook)

190. HOWARD, Harold John. An Evaluation of the Physical Education Program for Boys at the Lakewood High School, Licking County, Ohio. M. A. in Physical Education. 1961. (C. G. Hixson)

191. KAUFMAN, Wayne Sanford. A Comparison of Two Methods of Rounding First Base in Baseball. M. A. in Physical Education.

1961. (W. Ashbrook)

192. McDANIEL, Joe Wesley. An Experimental Study of the Effect of the Golf-Lite on Controlling the Golf Swing. M. A. in Physical Education. 1961. (D. Mathews)

193. MICHIELLI, Donald Warren. The Effect of Lowered Internal Muscle Temperature on the Strength of the Elbow Flexors When the Biceps Brachii Is Cooled to 27° C. M. A. in Physical Education. 1961.

194. O'BRIEN, Ronald Francis. The Effects of Cold Applications on the Endurance of the Elbow Flexor Muscles. M. A. in Physical Education. 1961. 18 p. (D. Mathews)

195. ROSS, Mattie Ellen. The Relationship of Eye-Hand Coordination Skills and Visual Perception Skills in Children. Ph. D. 1961. (D. Mathews)

196. SLUSHER, Howard Sidney. The Effect of Instruction in Values on an Elementary Basketball Class at the Ohio State University. M. A. in Physical Education. 1960. 67 p. (C. G. Hixson)

197. SWEENEY, James Michael. The Guided Play Experience as a Factor in the Social Integration of Elementary School Children. M. A. in Physical Education. 1960. 49 p. (N. Allenbaugh)

198. TONG, Curtis Whitfield. An Evaluation of Programs of Physical Education of Selected Schools in Franklin County, Ohio. M. A. in Physical Education. 1961. 154 p. (W. Ashbrook)

199. TRUITT, Frank Wilson, Jr. An Analysis of the Scoring Techniques of the Ohio State University's 1960 N. C. A. A. Championship Basketball Team. M. A. in Physical Education. 1961. (W. Ashbrook)

200. WILGUS, Bill Eugene. The History and Development of Intercollegiate Athletics at Ashland College, 1878 - 1959. M. A. in Physical Education. 1960. 95 p. (B. Bennett)

201. WOOTEN, Edna Plock. The Comparison of O_2 Uptake of Women While Walking in Various Types of Footwear. Ph. D. in Physical Education. 1961. (W. Ashbrook)

Ohio University, Athens, Ohio (J. G. Mason)

202. CLAPP, Jeanette Gayle. A Proposed Physical Education Program for Girls in Selected Secondary Schools of Pitt County, North Carolina. M. S. in Physical Education. 1961. 91 p. (J. G. Mason)

Girls physical education programs were evaluated in nine selected schools by visitations and interviews using the Health and Physical Education Score Card No. II developed by the Committee on Curriculum Research of the College Physical Education Association. Their average percent effectiveness was 32--compared to 28 nationally and 30 for North Carolina. Inadequacies resulted from a lack of qualified instructors and funds, limited curricula, and insufficient facilities and equipment. Because the schools had similar characteristics, a common program covering required and adapted physical education, intramural and extramural sports, and an interscholastic athletic program was proposed to aid the Pitt County Board of Education in providing an adequate girls physical education program.

203. GUALTIERE, William S. A Study of the Effect of the Figure-Eight Ankle Wrap Bandage on Performance in Selected Basketball Skills. M.S. in Physical Education. 1961. 67 p. (J. Mason)

One hundred male university students were tested in speed, vertical jump, and agility with and without the figure-eight ankle wrap. On the basis of significance at the .05 level, the figure-eight ankle wrap had no effect on running speed, restricted vertical jumping, and improved agility. The wrap was recommended for injury prevention, and the effect of the ankle wrap with heel lock should be investigated.

204. MOUROUZIS, Nick. A Study of Current Practices Pertaining to the Medical Care and Insurance Coverage of High School Athletes in the State of Ohio. M.S. in Physical Education. 1961. 122 p. (J. G. Mason)

Questionnaires were sent with the cooperation of the OHSAA to 953 member schools in order to determine current practice in medical care and insurance coverage for athletes, to compare policies of the five leading insurance companies, to provide a guide for school administrators, and to encourage better medical care and insurance coverage. A majority of schools had a physician responsible for advice, referral, and treatment of athletic injuries. Less than one-third had written policies governing procedures in medical emergencies occurring during practice. Three-fourths of the schools sponsoring football had a physician present during games. Seven-tenths had qualified trainers for practice sessions and games. And most schools had insurance premiums paid by the parents or the school and parents.

205. REMLEY, Mary L. A Study of Pre-camp and In-service Training for Counselors in Private Camps for Girls. M.Ed. in Physical Education. 1961. 71 p. (C. T. Nessley)

Current practices for indoctrination and training of counselors in private camps for girls were obtained from review of the literature, a questionnaire to camp directors, and interviews with six directors of camps in Minnesota and Wisconsin. The pre-camp and in-service training was rather varied depending on the personal preference of the director, the philosophy of the camp, the proportion of new counselors, and the nature of the program, but pre-planning and orientation of new counselors were considered necessary.

University of Oregon, Eugene, Oregon (M. S. Poley)

206. GREENE, Walter H. Interrelationships Between Measures of Personal-Social Status and the Relationships of These Measures to Selected Physical Factors of Ten-Year-Old Boys. M.S. in Physical Education. 1961. 119 p. (H. H. Clarke)

207. GRIFFIN, Norma Sue. A Study of the Effect of a Modified Weight Training Program on the Strength Development of Women Students at the University of Oregon. M.S. in Physical Education. 1961. 57 p. (J. F. Woodruff)

208. HASSMAN, Ralph P. Changes in the Physical Status of Varsity and Freshman Wrestlers at the University of Oregon Following a Six-Week Cessation of Organized Team Practices and Competition. Ed.D. 1961. 74 p. (P. O. Sigerseth)

From the 1957 freshman and varsity wrestling team, 27 were tested just before and six weeks after the end of organized training and competition for arm flexor strength, resting pulse rate, pulse rate during recovery from exercise, respiration rate, age, height, weight, and upper arm girth. Expired air was collected during 10 minutes of rest, 3 minutes raising pulley weights 15 times/minute while supine, and 10 minutes of recovery. Significant increases occurred six weeks after cessation of training in flexor strength of both arms, body weight, pulse rate during rest, exercise, and recovery, oxygen consumption during rest, and oxygen debt. Increases in weight did not correlate significantly with increases in arm strength, and the differences on the remaining tests were not significant.

209. OLSON, Arne L. Characteristics of Fifteen-Year-Old Boys Classified as Outstanding Athletes, Scientists, Fine Artists, Leaders, Scholars, or as Poor Students or Delinquents. Ph.D. 1961. 242 p. (H. H. Clarke, P. O. Sigerseth)

Boys who had outstanding accomplishments in athletics, science, fine arts, leadership, or scholarship were compared with boys in the same schools who had not made outstanding records in these areas. The subjects were 100 boys from the longitudinal growth study conducted in the Medford, Oregon, public schools. The groups were contrasted on maturity, anthropometric, body physique, and strength tests. The results showed that the only trait in common for all outstanding groups was a higher level of intelligence; that boys accomplished in science had higher academic achievements than did other boys; that scholars, leaders, and boys outstanding in music and art were not different from other boys in physical measures; that outstanding athletes were superior in maturity, mesomorphic physique, chest girth, explosive power, speed and agility, and strength; that boys who were delinquent came from all socio-economic levels and were indistinguishable from other boys in the traits studied.

210. PEERY, Everett D. Group Games for Orthopedically Handicapped Children. Ed.D. 1961. 105 p. (M. S. Poley)

Purposes of this study were to select and modify games of low organization for group participation by orthopedically handicapped children and to present them so untrained persons could use them, as group games for such children. Games were selected in accordance with criteria developed for the study and were modified and evaluated through use with several groups of handicapped children in selected institutions in Oregon, California, and Washington.

211. RUTZ, Margaret L. A Plan of Proficiency Testing in Physical Education for Undergraduate Women at the University of Oregon. M.S. in Physical Education. 1961. 58 p. (J. G. Woodruff)

212. SCHOPF, Theodore G. Construction of a Muscular Strength Test for Boys in Grades Four, Five, and Six. Ph.D. 1961. 109 p. (H. H. Clarke)

The purpose of this study was to construct a short battery of strength tests for boys in grades 4, 5, and 6, based on the measurement of individual muscle groups. Eighteen of Clarke's cable-tension strength tests, sampling the major muscle groups throughout the body, were administered to 128 boys, 9 through 12 years of age. By multiple correlation, with the average of the 18 tests composing the criterion, the following four strength tests were selected: shoulder extension, ankle plantar flexion, trunk extension, and knee extension. Norms were based on testing 826 boys in Oregon elementary schools. The norms are based on the age and weight of the boys, following essentially the procedures used by Rogers in constructing Strength Index norms.

213. WATT, Norman S. A Comparison of Two Methods of Physical Fitness Training in Low Fitness Males at the University of Oregon. M.S. in Physical Education. 1961. 66 p. (W. P. Rhoda)

214. WEBB, Florence. An Exploratory Study To Determine the Effects of the Number of Implicit Rehearsals and the Spacing of These Rehearsals on the Learning of a Motor Skill. Ph.D. 1961. 109 p. (M. S. Poley)

Sixty freshman women were taught archery skills in class and augmented overt practice with implicit rehearsals. The subjects were randomly assigned to one of 12 groups, each completing a given number of mental practices. The F ratio of .995 showed no significant difference among the various numbers of rehearsals and the distribution of them. A second degree polynomial fitted to the data indicated that 12 mental practices were better than either 8 or 16, especially within a one- or two-week period. Learning curves, based on weekly scores, indicated that the best factors to investigate further are from 8 to 12 implicit rehearsals variously spaced over one or two weeks.

215. WEINBERG, Herbert A. A Comparison of the Effects of Conventional and Television Instruction upon Attitudes and Achievement in Health Education. M.S. in Health Education. 1961. 84 p. (F. B. Haar)

The Pennsylvania State University, University Park, Penna. (E. A. Gross)

216. BENDER, (Mrs.) Eileen Koper. The Relationship Between Rate of Learning and Retention of Certain Sensorimotor Skills. M.S. in Physical Education. 1961. 204 p. (J. D. Lawther)

217. BLACK, Ronald. The Differences in Reaction Time and Movement Time Among Various Hand and Foot Preference Groups. M.S. in Physical Education. 1961. 72 p. (J. D. Lawther)

218. BROACA, Peter Francis. Comparison of Performance in Successive Quarter Mile Runs Preceded by Consumption of Varied Amounts of Liquid. M.S. in Physical Education. 1961. 51 p. (J. D. Lawther)

219. BUSH, Jone Johnson. The Effect on Early Motor Learning of Forcing Hypothetically Correct Visual Behavior on the Learner. M.S. in Physical Education. 1961. 56 p. (J. D. Lawther)

220. DAILEY, Jacqueline. The Nature of Motor Learning as Revealed Through a Study of the Sensory Handicapped. M.S. in Physical Education. 1961. 109 p. (J. D. Lawther)

221. GALLAGHER, James Dennis. An Analysis of Eye Movements and Visual Focus During Early Learning and Later Performance in Juggling. M.S. in Physical Education. 1961. 83 p. (J. D. Lawther)

222. GROVE, (Mrs.) Geraldine A. The Effects of Participation in Tap Dancing on Certain Motor Abilities of College Women. M.S. in Physical Education. 1961. 46 p. (J. D. Lawther)

223. HILL, (Mrs.) Patricia Ann. A Dancer's Ability To Communicate Ideas and Emotions Through Dance Gestures. M.S. in Physical Education. 1961. 143 p. (J. D. Lawther)

224. MOWRY, Paul Jason. Prediction of Grade Point Average for Physical Education and Recreation Majors at the Pennsylvania State University. M.S. in Physical Education. 1961. 98 p. (J. D. Lawther)

225. NESSLER, Joan. An Experimental Study of Methods Adapted to Teaching Low-Skilled Freshman Women in Physical Education. Ph.D. 1961. 202 p. (J. D. Lawther)

226. REIFINGER, Ralph Charles, Jr. The Frequency of Maximum Effort Most Favorable for the Development of Endurance in Prison Inmates. M.S. in Physical Education. 1961. 81 p. (J. D. Lawther)

227. RIVENES, Richard Sven. Effect on Motor Skill Acquisition and Retention of Teaching by Demonstration with and without Accompanying Verbal Explanation. M.S. in Physical Education. 1961. 61 p. (J. D. Lawther)

228. SAUERS, Richard James. The Effect of Varying the Rest Interval on Retest Performance in a Motor Fitness Battery. D.Ed. 1961. 184 p. (J. D. Lawther)

229. STULL, George Alan. Relationship of Quantity and Distribution of Practice to Endurance, Speed, and Skill Development by Beginners. D.Ed. 1961. 120 p. (J. D. Lawther)

230. TAIT, George Thomas. The Effect of Wearing Ten-Pound Jackets on Development of Endurance Training. M.S. in Physical Education. 1961. 32 p. (J. D. Lawther)

231. VALENTINE, Ann M. The Effect of Selected Physical Education Activities on the Balancing Ability of College Women. M.S. in Physical Education. 1961. 62 p. (J. D. Lawther)

232. VITTORIO, Gary Ross. The Rate of Development and Effects of Double Work Periods on Endurance in Varying Age Groups. M.S. in Physical Education. 1961. 95 p. (J. D. Lawther)

San Diego State College, San Diego, California (P. Governali)

233. HAUENSTEIN, Carrol B. A Study of Girls' Play Days as an Educational Device in the Public Schools of Southern California. M.A. 1961. 104 p. (F. Shannon)

Questionnaires were returned by 283 of 369 respondents in five counties. Play days were more common in rural than urban and in senior than junior high schools. They were considered desirable as a maturing experience, as play for play's sake, for emotional growth, and for development of social skills, good sportsmanship, and understanding of others. Source materials were found scanty and needed. Most administrators and principals understand play days, but no relationship was found between this understanding and the physical education training of the teacher.

234. MAGIN, Elmer B. A Survey of Imperial Valley High Schools (Southern California) To Determine the Possibility of Including More Activities in Their Present Interscholastic Competitive Athletics Program. M.A. 1961. 125 p. (F. Kasch)

Questionnaires were administered to a sample of students, teachers, and athletic directors in each school. Boys participated in interscholastic athletics to a much greater extent than did students in other geographical areas, and the percentage of students participating was inversely proportional to school size. An overwhelming majority of boys favored expansion, and their preferences were, in rank order, for swimming, bowling, wrestling, gymnastics, and tennis. One-third of the teachers indicated willingness to assist, and their preferences were for tennis, swimming, golf, gymnastics, and softball.

235. NOEL, William McClintic. The Use of Alcoholic Beverages by Freshman Students at San Diego State College. M.A. 1961. 149 p. (A. Kitzinger)

Questionnaire returns from a sample of 300 freshmen indicated that 75 percent of the men and 73 percent of the women use alcohol, as did the majority of these students' parents. More men than women drove after drinking, and 9 percent of the men had been arrested for alcoholic indulgence. The majority were drinking before age 21 and before entering college. This has obvious implications for parents, teachers, and law enforcement officers.

236. PEASE, Gerald Frederick. Maximum Breathing Capacities in High School Boys. M.A. 1961. 49 p. (F. Kasch)

Eight boys, age 15 to 17 from 20 physical education classes, volunteered as subjects. Expired air during maximum respiration for 12 seconds was collected and height, weight, and surface were measured. Data for boys 15 pounds above or below Meredith's standards were not used. Mean maximal breathing capacity was 146 liters/minute with a standard deviation of 21.30. The correlation of maximum breathing capacity with weight was not significant, but the correlations with height and surface area were significant at the .001 level. Performances by 15- and 16-year-olds were higher than those found by Ferris, possibly because of considerably less frictional resistance in the test equipment. Present data matched the prediction equation by Motely at +1 SD but were 6 percent below at the mean and 12 percent below at -1 SD. Present norms for maximum breathing capacity seemed inadequate and norms by age seemed desirable.

237. REEVES, William C. Weight Training for Basketball Players. M.A. 1961. 50 p. (G. Ziegenfuss)

Basketball coaches in the San Diego Section of the California Interscholastic Federation were surveyed by questionnaire. A total of 54 percent had used weight training in their program and planned to continue; 86 percent not using weight training considered some other activity more beneficial and the remainder planned to use it next year. Little or no evidence was found that weight training impaired basketball performance, and some evidence indicated that it improved vertical jumping ability.

238. ROGERS, John S. A Study of the Relationship Between Physical Performance and the Weight-Bearing Surface of the Foot. M.A. 1961. 50 p. (F. Kasch)

Broad jump and 50-yard dash performances of 143 Caucasian boys from grades 7, 8, and 9 were measured. Footprints were recorded with a Pedograph, and the weight-bearing area was measured with a planimeter. The group was divided into subgroups at 15-pound intervals to compensate for differences in body weight. No significant relationship was found between performance and the weight-bearing area of the foot.

239. WEBB, Zaidee. A Syllabus for Teachers of Girls' Track and Field. M.A. 1961. 267 p. (C. Sportsman)

This syllabus on girls track and field was developed after a review of literature published since 1950 and correspondence and interviews with leaders in the specific field. Materials were adapted for girls in accordance with the rules of the Amateur Athletic Union and in compliance with the standards for girls track and field set forth by the Division for Girls and Women's Sports, AAHPER. Subject areas emphasized techniques of teaching girls track and field activities, standards for girls track and field, officiating, and the organization and conduct of a track and field meet.

Smith College, Northampton, Massachusetts (E. Way)

240. BIERWERT, Jessie. Public Relations for Physical Education. M. S. in Physical Education. 1961. 81 p. (E. Way)

A survey of function, principles, and tools of public relations is presented. As revealed by the professional literature, the status of public relations is unsatisfactory. A program of public relations for the profession was proposed.

241. COLES, Carolyn Stearns. The Technical Aspects of Dance Production for Educational Television. M. S. in Physical Education. 1961. 99 p. (E. Way)

The emphasis is on the technical problems a teacher might encounter when choreographing an educational dance program. It includes discussions of the camera, lighting, make-up, costuming, and set construction.

242. FUSEK, Judith. An Investigation of Dominance as Measured by the Factors of Balance, Dexterity, and Strength. M. S. in Physical Education. 1961. 91 p. (E. Way)

Lateral dominance of the hands and feet can be expressed only in terms of the trait measured, for there is often inconsistency in the preference indicated by the tests. Approximately 7 percent of the cases were found to have the same laterality ratings in all tests. Approximately 33 percent, 45 percent, and 38 percent of the cases were homolateral in balance, dexterity, and strength, respectively.

243. PICKEL, Donna. The Development of an Instructional Film on Squash Racquets. M. S. in Physical Education. 1961. 60 p. (E. Way)

Techniques for beginners and five of the basic shots in squash were demonstrated. A complete squash game which can be used to teach scoring concludes the film. The execution of each of the techniques was based on its description in selected literature.

244. STEIMEN, Ann L. Carl L. Schrader: Pioneer Physical Educator. M. S. in Physical Education. 1961. (E. Way)

This biographical study of the professional life and contributions of Carl Schrader is supported by an analysis of his writings and by interviews with Mr. Schrader and his former students.

245. WORDEN, Cherylee. A Study of the Effects of Relaxation on Selected Elements of Skill. M. S. in Physical Education. 1961. 66 p. (E. Way)

Two groups of students were tested on throwing accuracy, static balance, hip flexibility, hand steadiness, and arm speed. One group received relaxation training during a five-week period. Relaxation training influenced results in hip flexibility, arm speed, and hand steadiness (.025 level of confidence) and had no effect on throwing accuracy and static balance. Relaxation training seems to have affected only the results of those tests which involved a single body part.

South Dakota State College, Brookings, South Dakota (G. E. Robinson)

246. CAMPBELL, Ronald D. The Effect of a Progressive Resistance and Flexibility Exercise Program on Free Running Speed. M. S. in Physical Education. 1961. 45 p. (G. E. Robinson)

247. GREENWOOD, David H. The Effect of a Weight Training Program upon Strength and Trunk Flexibility of Football Players at South Dakota State College. M. S. in Physical Education. 1961. 57 p. (S. Marshall)

248. HANSON, Donald D. A Comparative Study of the Physical Fitness of the Fifth Grade Students in Brookings, South Dakota, with the Fifth Grade Students in Cedar Rapids, Iowa, Based on the Iowa Test of Motor Fitness. M. S. in Physical Education. 1961. 76 p. (E. A. Heuther)

249. JOSLIN, Ronald L. The Effect of Isometric and Resistance Type Exercises on the Strength of the Knee Joint as Shown by the Cable Tension Strength Test. M. S. in Physical Education. 1961. 51 p. (S. Marshall)

250. KITTLESON, Dan H. The Effect of a Program of Static Contraction, Isometric, and Isotonic Exercises on Strength Development of Sixth Grade Boys and Girls as Administered by the Classroom Teacher. M. S. in Physical Education. 1961. 57 p. (G. Robinson)

251. MUNDT, Sharon Ann. A Comparative Analysis of Performance of College Women on the Kraus-Weber Test and the AAHPER Test. M. S. in Physical Education. 1961. 58 p. (G. Crabbs)

252. O'BRIEN, Ronald J. A Comparison of Reaction Times to a Kinesthetic and a Tactual Stimulus for Groups of Athletes and Non-Athletes. M. S. in Physical Education. 1961. 42 p. (G. Robinson)

University of Southern California, Los Angeles, California (E. Metheny)

253. BOWER, Muriel G. A Test of General Fencing Ability. M. A. in Physical Education. 1961. 82 p. (L. Ellfeldt)

254. DORN, Marian J. A Survey of Cheerleading Programs in the Larger High Schools of California. M. S. in Education. 1961. 77 p. (L. Ellfeldt)

255. EGSTROM, Glen Howard. The Effects of an Emphasis on Conceptualizing Techniques During Early Learning of a Gross Motor Skill. Ph. D. 1961. 121 p. (A. Lockhart)

Organized into six experimental and control groups, 120 male college students participated in ten practice periods devoted to learning a ballistic skill within a four-week period. The relative amounts of time allotted to manual practice of the skill and practice in conceptualizing it varied from group to group. Subjects were tested at the beginning, middle, and end of the learning period. While periods of manual practice alone and periods of manual practice combined with periods of conceptualization were equally effective in producing the desired skill learning, the use of conceptualization practice had the added value of reducing the amount of equipment needed as well as the time demands on the sports facilities for achieving the desired learning.

256. FOREMAN, Kenneth Everett. An Analysis of the Activities of

Selected Male Teacher Educators in the Area of Physical Education. Ed.D. 1961. 192 p. (E. C. Davis)

The study was directed toward suggesting a partial solution of the problem of teacher shortage in terms of discovering more effective ways to utilize the capabilities and time of available teacher educators. A total of 119 teacher educators, 18 department chairmen, 8 college deans, and 5 jurymen, representing 115 institutions in 38 states, rated functions performed by teacher educators in terms of importance, difficulty, frequency, and curricular emphasis. It was concluded that job analysis, supplemented by jury opinion, could provide information that might be used to determine more effective assignment of the limited time and abilities of available personnel in teacher education.

257. KUHNS, Grant. The Construction and Validation of an Electro-Mechanical Instrument for the Measurement of Vertical Jump Performance. M.S. in Education. 55 p. (G. Logan)

258. ROWAN, Alan H. The Development of a Sprint Interval Track Training Program at the High School Level. M.A. in Physical Education. 1961. 65 p. (E. Metheny)

259. THOMAS, Paul. Economy of Learning at Beginning Levels of Gross Motor Performance. Ph.D. 1961. 180 p. (A. Lockhart)

The hypothesis tested was that early learning of sports skills was facilitated by focusing the learner's attention on a specific goal to be attained by using the skill in a competitive situation rather than on the movement patterns of the skill as such. Organized in experimental and control groups, 150 junior high school boys participated in experiments with soccer, handball, volleyball, football, badminton, and basketball skills. The findings supported the hypothesis at the .01 level of confidence.

260. TRIMBLE, Dennies Lynn. Folk Dances of Japan. M.A. in Dance. 1961. 161 p. (L. Ellfeldt)

Springfield College, Springfield 9, Massachusetts (E. W. Seymour)

261. BROSNAN, James P. A Survey of Physical Education in the Secondary Boarding Schools for Boys in the United States. M.S. in Physical Education. 1961. 64 p. (C. Shay)

The study surveyed 48 secondary boarding schools concerning their physical education programs. Broad areas represented in the questionnaire were professional preparation of personnel, administration, facilities, and activities within the program. Over three-fourths of the schools provided a required program of after-school athletics as their physical education offering. The remainder scheduled required classes during the academic class day. In addition to summarizing the replies to the questionnaire, the author listed a number of recommendations for effective administration of physical education programs in schools of this type.

262. DARLING, Donald E. A Comparative Study To Determine the Effect of Heel Raise and Deep Knee Bend Exercises on the Vertical Jump. M.S. in Physical Education. 1961. 47 p. (E. Steitz)

Twenty subjects, ranging in age from 14 to 16 and all members of a high school junior varsity basketball team, were equated into two groups on the basis of Sargent Jump ability. One group performed heel raises with weights distributed above the shoulders three days a week for five weeks. The other group exercised with deep knee bends for the same length of time, also with weights on the shoulders. At the termination of the study, the heel raising group mean increased 1.65 inches for a t of 4.23 which was significant beyond the .01 level. The knee bend group mean increased 2.1 inches for a t of 3.55 which was significant beyond the .01 level. With identical initial means, the latter group showed a final mean .45 inches greater than that of the former, but this difference was not significant (t of .64).

263. DEERING, Niataja V. A Proposed Program of Physical Education for the Girls in the Dunbar High School of Lynchburg, Virginia. M. S. in Physical Education. 1961. 154 p. (R. Evans)

The study endeavored to formulate a functional and practical program of physical education, with particular emphasis on physical fitness, based on sound educational principles and methods, modified by facilities and personnel available, designated to meet the needs of the girls in the Dunbar High School of Lynchburg, Virginia.

264. DIXON, Robert M. Changes in the Circulating Eosinophil Level Before, During, and Following Speech Class Examinations. M.S. in Education. 1961. 55 p. (C. Keeney)

Twelve male and female college students of a public speaking class served as subjects in this study. Blood samples were taken before and after the first and last speech of the term. Other samples were taken when the subjects were not confronted with a speech situation to determine normal resting eosinophil levels. Grades given by the instructor were also recorded. The eosinophil response elicited during a speech examination situation varied inversely with the grade evaluation of the instructor, and the magnitude of the eosinophil response was less at the end of the term than it was at the beginning.

265. DUPEE, Ralph K. A Study To Determine the Relationships of Body Weight and Strength/Weight Ratio to Total Work Done in Pull-Ups. M. S. in Physical Education. 1961. 61 p. (C. Keeney)

Total work was the product of body weight and total body distance, with the latter the product of the pull-ups and the change in the center of gravity. The strength/weight ratio was pull-up strength divided by body weight. Pull-up strength was estimated by McCloy's Arm Strength Formula and measured with a cable tensiometer (r of .91). No significant linear regression between body weight and total work done was found. There was a significant negative relationship between body weight and number of pull-ups. There was also a significant positive relationship between strength/weight and total work done, suggesting that the strength-weight ratio be considered as a possible criterion of physical fitness.

266. EASTMAN, Norris W. A Study of Supination and Pronation in the Talo-Calcaneal Joint of the Foot. M. S. in Physical Education. 1958. 68 p. (P. Karpovich)

This study was concerned with development of an objective method for measuring supination and pronation in the talo-calcaneal joint (angle C, the angle formed by the lower legs and calcaneous). Findings included: (1) heel heights had no significant effect on the degree of supination and pronation; (2) as the feet were placed at increasing distances apart, angle C varied significantly, with ten inches being most conducive for proper alignment of the talus and calcaneous; (3) even body weight distribution was best for consistency in measurement of angle C; (4) the goniometer was validated as an instrument for measuring angle C by the correlation of .96 between goniometric and photographic methods of measurement.

267. EASTMAN, Paul R. A Study of the Developmental Process of

Springfield College Physical Education Majors Toward Their Professional Choice. M. S. in Physical Education. 1957. 47 p. (E. Champlin)

The purpose was to determine trends in the developmental process of Springfield College freshman physical education men majors toward their professional objective. Participation in high school varsity athletics was a strong influence in choice of profession, with many becoming interested in this field by their junior year in high school.

268. EATON, William N. A Survey To Examine the Criteria of Football Offenses. M. S. in Physical Education. 1961. 53 p. (C. Shay)

This study examined the criteria upon which 21 Massachusetts high school football coaches built their offenses. It was concluded that speed, ball control, simplicity, balance, deception, power, players' confidence, and timing must be used as basic criteria in designing an offense. Other criteria to be considered were the long gain, balance of offensive and defensive styles, quarterback training, and blocking angles.

269. FARMER, George T. The Nature and Extent of Injuries in Physical Education Classes in Prince Georges County, Maryland, Secondary Schools, 1956-1958. M. S. in Physical Education. 1961. 70 p. (C. Shay)

A total of 22, 960 participants had 509 injuries (2. 2%). The most common injuries were sprains, followed by wounds and fractures. The incidence of injury was greatest in basketball, soccer, apparatus, and baseball and least in golf, tennis, calisthenics, and badminton.

270. FINLEY, F. Ray. Kinesiological Analysis of Human Locomotion. D. P. E. 1961. 124 p. (Microcard) (P. Karpovich)

Electrogoniometry was used to analyze normal and pathological gaits, running, the track start, throwing a baseball and football, discus throw, batting, shot putting, golf drive, and bowling. Goniograms of elbow, ankle, and knee action of normal subjects walking on the treadmill or floor showed a consistent pattern permitting measurement of various phases and determination of borderline and pathological gait. Electrogoniometry was found practical and useful in analyzing human movement.

271. FOWLER, William H. A Comparative Study of Evaluative Attitudes of Outstanding Varsity Athletes and Junior Varsity Athletes. M. S. in Physical Education. 1961.

Ten outstanding varsity athletes in football, basketball, and wrestling in universities of the Ontario Quebec Intercollegiate Athletic Association and ten randomly selected junior varsity competitors in each sport were given the Allport, Vernon, and Lindzey "Study of Values" immediately after the completion of their competitive schedule. The outstanding athletes showed more consistent motivation in the "non-human" theoretical economic traits while the junior varsity athletes sought to gain or expressed interest in the mutual satisfaction of participation with others. Nearly identical mean scores occurred between sports groups, but significant differences related to performance levels within each sport led to the conclusion that the degree of involvement in a sport has more bearing on personality formation than the type of sport engaged in regularly.

272. FREDERICK, Mary M. Naturalism: The Philosophy of Jean Jacques Rousseau and Its Implications for American Physical Education. D. P. E. 1961. 239 p. (Microcard) (R. Frost)

Rousseau's philosophy of naturalism paved the way for inquiry and experimentation which in turn gave impetus to physical education. Three ideas which greatly influenced American physical education were his insistence on the natural and spontaneous movements for proper growth and development; his promulgation of the unity of mind and body; and his belief in the value of the individual. Four primary beliefs in Emile had far-reaching effect later in Wood's program of naturalism, Hetherington's "New Physical Education" program which stressed the possibilities of character development, Williams' theory of the importance of experience and need for self-expression, and Nash's belief in the need of the individual to be creative and to experience emotional development.

273. GIBSON, Dennis A. Effect of a Special Training Program for Spring Starting on Reflex Time, Reaction Time, and Sargent Jump. M. S. in Physical Education. 1961. 48 p. (P. Karpovich)

Twenty-four grade 8 male students were given initial measurements on right patellar tendon reflex time, reaction time of the right lower leg, and the Sargent Jump. Subjects underwent a six-week training program (twice a week) of sit-ups, push-ups, pull-ups, side straddle hops, and sprint starts. Measurement following the training program revealed a mean reduction of 6.17 milliseconds in patellar tendon reflex time and of 14.63 milliseconds in reaction time. The Sargent Jump mean increased 1.12 inches. All changes were significant beyond the .01 level (t's of 2.95, 2.87, and 2.95).

274. HAYMAN, Sanford E. A Study of the Status of Physical Education in New England. M. S. in Physical Education. 1961. 32 p. (H. MacMullen)

To New England communities reported as having no program of physical education for boys at the secondary level were sent 204 questionnaires, with 166 returns. Of the respondents, 29 did provide a program and 37 intended to initiate one. Reasons given for absence of a program included the following: no definite state requirement (37), lack of facilities (82), teacher shortage (60), facilities used for another purpose (8), lack of community interest (7), and inability to finance a program (9).

275. JAMES, Sharpe. Relationship Between the Boys' Intramural and Interscholastic Athletic Programs in the Junior High Schools in Essex County, New Jersey. M. S. in Physical Education. 1961. 65 p. (E. Steitz)

Using a questionnaire, the writer visited all 22 physical education directors in the three-year junior high schools in Essex County, New Jersey. Homogeneity of participants was practiced in the intramural and interscholastic athletic programs with classification based on age, weight, class, and subjective judgment of the physical education director. The physical education staff had the complete responsibility of conducting both athletic programs. Both programs are sanctioned and financed entirely by the Board of Education. Both programs were accorded equal importance, and the consensus was that intramural athletics stimulated interscholastic athletics, and that interscholastic athletics stimulated intramural athletics.

276. JOHNSON, Walter A., Jr. The Effects of Various Length Spikes on the Distance in the Running Broad Jump. M. S. in Physical Education. 1961. 29 p. (W. Doss)

Ten experienced broad jumpers (college freshmen and varsity) were used as subjects. To stimulate an inclined plane, extra long spikes were used in the two foremost positions, medium length spikes in the two middle positions, and no spikes in the last two positions on the shoe of the take-off foot. For comparative purposes, each subject also jumped with a track shoe in which all spikes were of equal length. Each man jumped three times with each type of shoe on four different occasions for a total of 24 jumps per man. All subjects averaged a greater distance with the experimental shoe, and the difference for the entire group was significant beyond the .01 level (t of 3.5).

277. KJELDSEN, Erick. A Study To Determine the Relationships Between the Edwards Personal Preference Schedule and Participation in Gymnastics. M.S. in Physical Education. 1961. 65 p. (C. Shay)

Groups examined were members of the freshman gymnastic team, persons who failed to remain out for the team the entire season, and the top and bottom 33 percent of the beginning class in gymnastics. Successful participants in the gymnastics classes did not differ significantly from unsuccessful participants. Members of the freshman gymnastic team scored significantly higher in deference, order, and abasement than did the candidates who dropped out.

278. LITTLE, Rodney W. A Study of the Effect of Interscholastic Football Participation on Academic Grades. M.S. in Physical Education. 1961. 60 p. (E. Seymour)

From six high schools in Maine and Massachusetts, 115 varsity high school football players served as subjects. None of these boys engaged in interscholastic athletics in the winter season. The off-season mean academic average of 76.88 was .32 points higher than the in-season mean of 76.56 for a non-significant t of .76. Study hours per week in season, averaging 9.03 hours compared to an off-season mean of 8.59, gave a non-significant t of 1.33. In-season hours of extracurricular activities other than football averaged 3.59 hours per week against 8.34 hours during the off-season. The college preparatory students had mean academic averages significantly (.01) above those enrolled in other courses. The academic success of football players was affected neither favorably nor adversely by participation in football.

279. LITCHARD, Robert M. A Comparison of Scores on the Edwards Personal Preference Schedule of College Varsity Athletes Who Were Letter Winners, Non-Letter Winners and College Non-Athletes. M.S. in Guidance and Personnel Services. 1961. 82 p. (A. Kaynor)

Using all Springfield College students, the investigator probed for measurable differences of certain personality variables, as defined by Edwards, within three groups composed of varsity letter winners, participants who were not letter winners, and nonparticipants in varsity intercollegiate athletics. Individual variables were compared for significance in terms of felt needs expressed by the members of each group.

280. LUTES, Warren C. A Study To Determine the Best Locations for Obtaining Rebounds. M.S. in Physical Education. 1961. 78 p. (E. Steitz)

Ten rebound zones were assigned and both high school and college games were charted in terms of origin of shot and zone into which ball rebounded. Chi-square was used to see if given zones received significantly more rebounds than others on shots taken from each of the ten zones. The author made recommendations in terms of placement of rebounders based upon the site from which the shot was taken. In both high school and college games, more missed shots were taken from the left side of the court than from the right side. The Study did not include successful shots.

281. MCMILLEN, Betty Jo. A Study To Determine the Relationship of Physical Fitness as Measured by the New York State Physical Fitness Test to the Academic Index of High School Girls. M.S. in Physical Education. 1961. 42 p. (C. Shay)

From grades 8 through 12 at Southwestern Central School, Jamestown, New York, 339 girls were tested with the New York State Physical Fitness Test, and the composite fitness grade for each subject was computed. The Intelligence Quotient derived from the Otis Quick Scoring Mental Ability Tests and the academic index were obtained from the office records. Correlations were obtained between academic index and IQ of .81, between physical fitness and IQ of .26, and between academic index and physical fitness of .36. Partial correlation of .26 was found between physical fitness and academic index, holding the IQ constant. Using top and bottom quarters of the academic index distribution, a t of 2.11 (.05) indicated a higher level of physical fitness of those in the top quarter than of those in the bottom quarter.

282. MILLER, Richard. A History of Wrestling at Washington and Lee University and the Southern Conference Wrestling Tournaments 1921 to 1961. M.S. in Physical Education. 1961. 136 p. (R. Sparks)

A historical manual of wrestling at Washington and Lee University and at Southern Conference Wrestling Tournaments was reported in chronological order.

283. PAREKH, Atulkumar M. An Analysis of the Skills in Tennis. M.S. in Physical Education. 1961. 108 p. (E. Seymour)

An analysis of tennis skills treated in selected books and articles written by recognized tennis authorities was combined with an analysis of tennis skills in terms of principles of mechanics.

284. PARKER, Arthus B. A Study of the Relationship Between Reaction Time and Progressive Resistive Exercise. M.S. in Physical Education. 1960. 71 p. (C. Shay)

Ten women and 13 men participated for five weeks, three times weekly, in an intensive program of 12 basic progressive resistive exercises. Measurements were taken prior and subsequent to the study. Reaction times for men were shorter, and women showed a greater mean decrease during the study. Throughout the body, with the exception of the chest for the women and the chest and upper arms for the men, size decreased generally while body weight remained relatively constant. All subjects showed a marked increase in strength in every exercise and in grip strength, with positive relationship between grip strength and fast reaction.

285. PLUMB, Leslie C. A Study To Determine the Relationship Between Weight Training and Speed and/or Agility. M.S. in Physical Education. 1961. 45 p. (C. Shay)

Twenty-seven varsity football squad members participated in a nine-week weight training period (three times a week). Exercises performed were half knee bends, heel raises, bench press, and upright rowing exercise against heavy resistance. At the start and end of the study, all subjects were tested on the 50-yard run, leg strength with the dynamometer, and a speed-agility test. The mean for the 50-yard run was reduced .04 seconds, but the change was not significant. Leg strength showed a mean increase of 345.9 pounds and was significant well beyond the .01 level. The speed-agility mean decreased significantly. However, another sample took these tests but not the exercises, and analysis of covariance showed no significant difference between the final adjusted means of the two groups.

286. POLLOCK, James M. A Measure of Specific Physiological Responses Caused by College Oral Examinations. M.S. in Education. 1961. 70 p. (C. Keeney)

This study attempted to determine the effect of oral examinations on selected physiological responses and the degree of relationship between the responses and student performance. Changes in palmar sweat, pulse rate, and blood pressure were recorded, together with the student's rating of his own level of anxiety and tension. Grades on the examination were obtained from the instructors. The one statistically significant association which existed was between the perception of anxiety and performance in public speaking. All other relationships were nonsignificant.

287. POTTS, Harold E. The Development of a Rehabilitation Film for the National Paraplegia Foundation and the Kessler Institute for Rehabilitation. M.S. in Physical Education. 1961. 106 p. (S. Shaw)

The film "No Man Walks Alone" was developed as an educational vehicle which would depict the physical disability of paraplegia, the mental and physical adjustments required to overcome the physical limitations of paraplegia, and the organized assistance available to help rehabilitation not only for paraplegics but for all afflicted with disabilities.

288. RICKENBACH, Robert L. A History of the Evolution of the Rules of Collegiate Wrestling. M.S. in Physical Education. 1959. 158 p. (R. Sparks)

A record of the rules of collegiate wrestling was prepared, tracing their evolution and identifying reasons for changes. Material was obtained from letters, minutes of meetings, reports, official NCAA Wrestling Guides, and interviews with leading wrestling personalities.

289. ROBBINS, Walter W. A Survey of the Physical Education Program in the Elementary Schools in Baltimore, Maryland. M.S. in Physical Education. 1957. 95 p. (R. Evans)

This study evaluated professional preparation of teachers, facilities, administration, program, and organization in 27 of the 40 elementary schools in Baltimore, Maryland. The remaining 13 did not return the questionnaire. Summaries of questionnaire items showed preparation of teachers to be generally good, program and administration satisfactory, but facilities inadequate for optimum program results.

290. ROBIDAS, Raymond A. A Survey of Physical Education in the Quebec Classical Colleges. M.Ed. in Physical Education. 1961. 141 p. (E. Seymour)

The study evaluated the physical education programs in the classical colleges of the province of Quebec and, in light of the data obtained, made recommendations for their improvement. The study utilized a check list patterned after the LaPorte Score Card for Secondary Schools, and the author personally visited all 30 colleges included in the survey and checked the various items.

291. SNOW, Graham S. A Plan of Organization for Physical Education in the Public Secondary Schools of Newfoundland. M.S. in Physical Education. 1960. 137 p. (R. Evans)

The study described the present status of physical education in Newfoundland and formulated a broad plan of organization which might be used in physical education.

292. WILLIAMS, Clyde L. An Analysis of the Attitudes Toward Physical Education in the Curriculum and the Operation of the Physical Education Program in the Negro Secondary Schools in the State of Virginia. M.Ed. in Physical Education. 1959. 66 p. (C. Shay)

A questionnaire was sent to all 112 principals of Negro secondary schools in Virginia; 75 questionnaires were returned and 33 principals were interviewed. Individual items relative to the undergraduate preparation and physical education and athletic experiences of the administrators were analyzed, as were a number of items pertinent to program, personnel, facilities, and administration.

293. WILLIAMS, Harvey E. Physical Education in Rehabilitation: A Study of Selected Aspects of the Modern Movement up to 1953. D. P. E. 1961. 285 p. (S. Arsenian)

The study dealt with historical factors relating physical education to rehabilitation, physical education in the Veterans Administration hospitals, physical reconditioning in the armed forces, physical education in rehabilitation centers and clinics, recreation therapy in state mental hospitals, and physical education in special education in the United States.

294. WILLIAMS, Marion L. A Descriptive Analysis of the Male Springfield College Student Teacher in Physical Education. M. S. in Physical Education. 1961. 42 p. (W. Doss)

The study evaluated 121 male Springfield College student teachers in physical education in terms of personality characteristics and professional competencies. The subjects rated well in these areas except for a certain amount of inadequacy in handling class discipline and in self-expression.

295. WOLCOTT, Frank A. The Development of a Motion Picture and a Manual of Selected Competitive Skills Executed from Double Leg Circles on the Side Horse. M. S. in Physical Education. 1961. 41 p. plus film. (C. Shay)

An instructional motion picture film and accompanying manual were developed on selective competitive skills executed from double leg circles on the side horse to be used in coaching gymnasts in competitive side horse routines. The skills were filmed in sequence at normal, slow, and very slow speeds to permit a clear analysis of each skill.

Temple University, Philadelphia, Penna. (J. B. Oxendine)

296. FREDERICK, A. Bruce. Homemade Equipment and Supplies for Physical Education. Ed. M. in Health and Physical Education. 1961. 191 p. (J. B. Oxendine)

A comprehensive list of inexpensive equipment and supplies was developed for use in physical education. Constructed, tried, and evaluated according to predetermined criteria were 450 suggestions. Of these, 211 items were found suitable while 135 were not considered basically essential in a standard program but might be used to make the program more varied and interesting.

297. MEDVE, William John. The Relationship Between the Extent of Participation in Team Sports and the Rehabilitation of Men Incarcerated in a Reformatory. Ed. M. in Health and Physical Education. 1961. 72 p. (J. B. Oxendine)

In the study, 399 men between the ages of 16 and 30 were categorized as active, moderately active, and inactive according to participation in team sports during their incarceration. Rehabilitation was determined by institutional behavior (number of misconduct citations) and success or failure on parole. Chi square showed that subjects who were active or moderately active in sports had significantly better institutional and parole behavior than the inactive group but that the very and moderately active groups did not differ significantly in behavior.

Texas Women's University, Denton, Texas (A. S. Duggan)

298. BERGER, Margaret Kay. The Construction of an Objective Information Examination for College Camp Leadership Courses. M. A. in

Recreation. 1961. (E. K. Dillon)

Sixty each multiple choice and alternate response questions were administered by cooperative teachers to 514 students in 27 colleges in the Southern District, AAHPER. Test reliability and item analyses were determined. The revised examination of 50 multiple choice and 51 alternate response items was T-scaled.

299. CORMIER, Waldine Marie. A Survey of the Physical Education Programs for Girls in Catholic High Schools in the State of Texas 1960-1961. M. A. in Physical Education. 1961. (M. A. Murphy)

Questionnaire returns from 27 to 31 schools were used to evaluate the programs in comparison with the tentative standards (December 1960) of the Texas Education Agency and with seven additional items. The data were summarized and recommendations were made.

300. DEVENPORT, Mary Lou. A Comparative Study of the Physical Fitness Status of Girls Enrolled in Physical Education Classes with That of Girls Not Enrolled in Physical Education Classes at Snyder Junior High School, Snyder, Texas. M. A. in Physical Education. 1961. (E. K. Dillon)

The AAHPER Youth Fitness Test was administered to 80 girls enrolled and not enrolled in regular physical education classes. Results were calculated for the seven items and the total test. Conclusions were drawn and recommendations were made.

301. DEUPREE, Annie Jo. A Study of Staff Morale-Building Techniques Used in 1959 in Selected Camps Throughout the United States. Ph. D. 1961. (E. K. Dillon)

In 170 camps, 128 camp directors and 261 counselors responded to a questionnaire requesting a report of practices to build and maintain staff morale, evaluation of 38 suggested techniques, and selection of the best five techniques. Both directors and counselors were vitally interested in staff morale as an important element of a successful program. Private and organizational camps used essentially the same techniques. Camp directors tended not to evaluate the work of staff members or to require self-evaluations. Directors and counselors were in mutual agreement concerning the value of certain techniques.

302. GARRISON, Susanna. The Development of a Program of Follow-Up Services for First-Year Teachers with Specific Reference to the Graduates of the College of Education, University of Houston, Houston, Texas. Ed. D. 1961. (E. M. Small)

Possible follow-up services were collected from the literature and interviews. These were evaluated by 30 first-year teachers, their principals, and representatives of the College of Education. A recommended follow-up program was developed from the evaluation.

303. HARDIN, Ruby Lou. The Construction of an Information Examination for College Students Enrolled in Bowling Classes. M. A. in Health and Physical Education. 1961. (E. K. Dillon)

Sixty each alternate response and multiple choice questions were administered to 446 students in bowling classes at Texas Woman's University, Southern Methodist University, and North Texas State College. The results were treated statistically. A final examination to measure knowledge and understanding of bowling skills was developed.

304. INGRAM, Billie Imogene. An Evaluation of Camp Counselors' Handbooks. M. A. in Health and Physical Education. 1961. (L. E. Kratz)

Letters to 200 directors of camps affiliated with the American Camping

Association elicited 89 replies and 40 counselors' handbooks. These were analyzed and a topical outline for a handbook was developed.

305. LEE, Mary Clanton. Changes in Physical Fitness and Health Information of 118 Freshman College Women in Wells College at Aurora, New York. M. A. in Health, Physical Education, and Recreation. 1961. (M. A. Murphy)

The AAHPER Youth Fitness Test and Kilander Health Knowledge Test were administered to 118 freshman women at the beginning and end of the fall semester to determine changes in physical fitness and health knowledge. The data were analyzed and conclusions were drawn.

306. REED, Ann I. Profile of Woman: A Suite of Five Original Modern Dance Compositions Based upon Selected Stages of Woman's Life. M. A. in Dance and Related Arts. 1961. (A. S. Duggan)

Review of sociological and psychological literature provided characteristic traits and activities suitable for a suite of five modern dance compositions entitled "Infancy," "Childhood," "Adolescence," "Adulthood," and "Old Age." The choreography, accompaniment, costumes, and lighting were developed, and the suite, Profile of Woman, was presented during the 1961 spring tour of the Modern Dance Group of Texas Woman's University before its final presentation at the University.

307. STALLINGS, Martha Jeanne. The Development of an Instructional Motion Picture To Be Utilized as an Aid in Teaching Individuals To Officiate Basketball for Girls and Women. M. A. in Health and Physical Education. 1961. (E. K. Dillon)

The tentative script and scenes were carefully written, revised, and organized so the actual filming of action scenes, titles, and subtitles was done in seven hours. The narration was taped and edited with the working print before the final print with the sound track was processed. Forty-five individual viewers and members of the thesis committee considered the film satisfactory and useful.

308. YU, Marina. The History of Physical Education in China and the Factors Which Have Influenced Its Growth and Development. M. A. in Physical Education. 1961. (E. M. Small)

The history of physical education in China was presented in relation to the cultural, philosophical, and political influences of each historical period. Data were collected from documentary sources in English and Chinese, available in the United States, and through correspondence. Great progress has been made in developing a well-rounded physical education program for the general health and well-being of the Chinese people, and the modern program bears little resemblance to the physical activities of ancient China.

University of Utah, Salt Lake City, Utah (N. P. Neilson)

309. DUNKLEY, K. Wright. Modern Dance Techniques for the Male Dancer. M. S. in Physical Education (Dance). 1961. 131 p. (E. R. Hayes)

This study dealt with appropriate techniques for the male dancer and was delimited to the specific problems facing the teachers of male dancers in the intermountain area in regard to motivation, body mechanics, and appropriate dance experiences for men. The questionnaire and experimental methods of study were employed. Major conclusions were these: dance training should not be the same for men and women; a man should not sacrifice strength for flexibility; dance instructors do not agree on what should be stressed for the male dancer; men need encouragement to develop confidence in dance activities.

310. HINCKLEY, Mary Ann. Health Abnormalities of Freshman Women Which Affected Placement in Physical Education. M. S. in Physical Education. 1961. 71 p. (N. P. Neilson)

The general problem was to analyze the health records of registered first-quarter freshman women at the University of Utah for health abnormalities which affected placement in the required physical education program. Records from 1944 to 1959 were studied. There were 765 entering freshman women who required physical education program modifications (8.5%). The greatest percentage of abnormalities occurred in the respiratory, cardiovascular, skeletal, and rheumatic fever classifications.

311. MCLEAN, Robert E. Recreational Program of the Hopi Indians. M. S. in Recreation. 1961. 74 p. (J. L. Squires)

The study was delimited to the recreational program of the Hopi Indians living on the Hopi Reservation in Arizona. Some 3500 Hopi Indians live in semi-isolation upon three large mesas that jut into the Painted Desert of Northeastern Arizona. Data were obtained from personal interviews, observation, and the literature pertaining to the subject. Conclusions were these: Hopi Indians realize that recreation is for everyone; the leadership and organization are not formalized; facilities are very inadequate; and they realize that the worthy use of leisure time has value.

312. NALDER, Wallace K. A Method of Resolving a Football Game Tie. M. S. in Physical Education. 1961. 40 p. (J. F. Davis)

The study attempted to determine whether there is a reasonable and accurate means of determining the winner of a tie football game. Fifty-four returned questionnaires disclosed that 21 states have a championship play-off and that 20 of those provide a means of resolving a tie game. It was recommended that the factors of 20-yard line penetrations, net yards gained, and first downs achieved be combined to indicate scoring potential by the formula 4.48a + .06b + 1.2c.

313. SCHWICH, Luther C. An Evaluation of a Teacher Education Program in Health and Physical Education. Ph. D. 1961. 160 p. (N. P. Neilson)

The problem was to evaluate the teacher education program in health and physical education at Concordia Teachers College, Seward, Nebraska, with the purpose of improving the programs in Lutheran elementary schools. Studied were 136 functions of physical education teachers. Data analyses disclosed strengths and weaknesses in the present program. It was concluded that teachers did not perform the functions to the same degree that they attested to their desirability and that the required program in health and physical education was not adequate to help all teachers attain the level of competency recommended in the literature.

University of Washington, Seattle 5, Wash. (M. R. Broer and R. K. Cutler)

314. BIRD, Evelyn Isabelle. Conditions and Attitudes Influencing Extracurricular Sports Participation of Eastglen Composite High School Girls. M. S. in Physical Education. 1960. 258 p. (M. R. Broer)

A total of 297 grade 10 and 11 girls responded to a questionnaire concerning participation in noon and after-school activities, three best liked and least liked sports, the administration and value of the program, their physical well-being, and influence of others on their participation. Respondents were categorized as participants, partly discontinued, discontinued, and non-participants. The survey showed that 66 percent were active in athletics, 15 percent discontinued all sport, and 19 percent were non-participants. The average athletic activities per respondent was 1.7, with grade 10 girls more active than grade 11 girls. The sport choices in rank order were swimming, dancing, volleyball, bowling, and badminton. Half the girls desired additional instruction. Over 25 percent more athletic than non-athletic girls had "best friends" participating. A large majority indicated they enjoyed sports and gained fellowship, self-assurance, and sportsmanship. Unavailability of desired sports, insufficient skill or instruction, lack of interest, knowledge of schedules and how to enroll, non-enrollment in physical education classes, and desire to do homework influenced participation negatively.

315. CARLSON, Howard Eric. Wetzel Grid Classification Techniques as Bases for Evaluating Individual Performances in Selected Physical Ability Tests. M.S. in Physical Education. 1961. 44 p. (G.S. Reeves)
Grade 8 boys in Kirkland, Washington, were classified by the Wetzel Grid and then compared on performance in selected activities from the Washington State Physical Fitness Test. Extremely heavy boys performed poorly in all tests. Relatively thin boys performed less well than those with "athletic" builds. Boys growing slightly faster than average were usually the best performers, followed by those growing at an average rate, a slow rate, and an extremely rapid rate, in that order.

316. COX, Kenneth M. A Study of the Attitudes and Opinions of Selected College Wrestling Coaches, Competitors, and Officials Throughout the United States Relative to the Possible Integration of Intercollegiate with International Wrestling Rules. M. S. in Physical Education. 1961. 250 p. (L. W. Stevens)
A comprehensive and specific proposal for integrating NCAA and AAU wrestling rules with International Rules was formulated and submitted to 50 college coaches, 25 college competitors, and 25 college officials in the United States. Eighty-eight responded. Extensive and specific recommendations for changes in current rules were formulated on the basis of their attitudes and opinions. A further recommendation was that these changes be tested experimentally in dual meets and tournaments.

317. FISHER, Edward S. A Comparison of the Conventional and Zone Systems of Basketball Scoring. Unpublished Master's Thesis. 1961. 45 p. (R. Cutler)
Accurate shot charts were kept of Renton High School's and opponents' shots during the season. Games were rescored on the basis of three zones from which field goals were made, with three points awarded to shots made from more than 15 feet from the basket. Shots attempted totaled 1102 in Area 1, 590 in Area 2, and 106 in Area 3. The revised scoring changed the actual score of every game, changed the outcome of one game, and made another a tie. The "zone" method of scoring tended to reduce the advantage currently enjoyed by tall players and put a premium on accuracy from distances greater than 15 feet.

318. GARNER, Johnnie Lemar, Jr. The Effect of Participation in Major Varsity Athletic Sports on the Scholastic Attainment of Selected High School Athletes, Whatcom County, Washington, 1955-59. M.S. in Physical Education. 1961. (Dr. R. K. Cutler)
Comprehensive grade point averages of 429 athletes were obtained from the permanent records of seven high schools with the permission of the county superintendent. Mean and median grade point averages were computed for the athletes and senior classes. The over-all average of all athletes was 2.46 (C-plus). A positive change in grade point average from 2.38 in 1955 to 2.45 in 1959 was found, and the difference between grade point averages for athletes and senior classes changed progressively from .29 in 1955 to .01 in 1959.

319. GILBERTS, Richard Allan. The Status of Intramural Programs for

Boys in Class AA Public High Schools in the State of Washington. M. S. in Physical Education. 1961. 147 p. (L. W. Stevens)

The nature, organization, and administration of intramural programs for boys in 75 Class AA public high schools in Washington were surveyed by questionnaire concerning staff guidance, activities per year, and specific budgetary allocation. Forty-seven schools (63 percent) met the criteria of staff guidance, at least three activities per year, and specific budgetary allocation. The common and varied aministrative procedures, activity offerings, and promotional methods were summarized to aid in future growth of intramural programs.

320. GLAZIER, Howard L. A Study of the Needs for a Public Swimming Pool in the Beacon Hill Community of Seattle, Washington, and the Possible Methods for Financing Such a Pool. Unpublished Master's Thesis. M.S. in Physical Education. 1961. 107 p. (J. Torney, Jr.)

On request from local PTA's, a committee was formed in 1958 and met bimonthly with the author as chairman. The committee cooperated in getting legislation passed in 1959 (House Bill No. 241) to permit revenue bonding for recreational facilities. Surveys were conducted in the community and schools to determine interest, need, placement, and probable utilization of the pool. Twenty-six similar communities in the state were surveyed by questionnaire concerning construction, financing, and operation of their pools. The survey results and methods for obtaining a public pool were summarized in the thesis.

321. HEATHCOTE, George (Jud). A Chronological Review of Washington State High School Basketball Tournaments Held at the University of Washington from 1923 through 1960. M. S. in Physical Education. 1961. 305 p. (R. K. Cutler)

Data were obtained from newspaper accounts, records of the University and the Washington HSAA, and personal interviews. The annual tournament was initiated by coaches at the University in 1923. In 1934 a joint operating policy was adopted, with the University handling managerial details at cost and the Association controlling the conduct of the tournament and receiving the profits. Inclusion of Seattle schools in 1945 increased interest, attendance, and revenue to the point where the Association could establish a permanent office with a full-time secretary in 1950. Further developments led to the formation of three separate state tournaments in 1957. Statistics for the tournaments were summarized in the Appendix.

322. NELSON, Arvid Noel. An Analysis of Accidental Drownings in King County, Washington, 1949-58. M. S. in Physical Education. 1961. 84 p. (E. L. Hughes)

Coroner's records listing cause of death as accidental drowning (except those in bathtubs and cesspools or from automobile and airplane crashes) were used as a basis for sending questionnaires to possible informants concerning the places, circumstances, ages of victims, and their swimming ability. Analysis of the data indicated in part that drownings were concentrated during the summer months, especially May, more on weekdays than week-ends, and in the late afternoon hours. Over 63 percent of the victims had no intention of entering the water, and swimming ability did not exempt them from being potential victims. Swimming and wading accidents made the highest contribution to the rate of drowning, with the concentration of bathers and the suddenness with which the victim sank being special contributing factors. Boating accidents most often involved small boats and failure to observe safety principles.

323. PARKER, E. Dale. A Study of Selected Administrative Practices

in Baseball Programs of National Collegiate Athletic Association Member Schools in 1958-59. M. S. in Physical Education. 1961. 334 p. (J. Torney, Jr.)

Questionnaires concerning course offerings, requirements, credits, personnel, and facilities were returned by 72 percent of the head baseball coaches in 269 NCAA-member schools. Data were processed by IBM 650. Respondents indicated less prestige for baseball than for football and basketball, need for improving programs, adequacy of some aspects of the NCAA program, and a belief in the unique character of collegiate baseball.

324. STEILBERG, Peter, Jr. A Comparison of Mountain Climbing Methods and Equipment Employed in the State of Washington for Selected Situations. M. S. in Physical Education. 1961. 9 p. (R. K. Cutler)

Questionnaire returns concerning specific situations in mountain climbing were obtained from 100 mountain climbers in the state to represent an "average sample." A jury of four of the state's best mountain climbers judged the adequacy of techniques and equipment reported by the "average climbers," which often varied from these employed by the experts. However, the experts exhibited considerable lack of agreement concerning techniques and equipment for selected situations.

325. TEMPLIN, Paul Hans. An Analysis of Health and Safety Practices Utilized for Football Players in Selected High Schools in the State of Washington--1960-61. M. S. in Physical Education. 1961. 197 p. (G. S. Reeves and Dr. C. A. Mills)

A random sample of half of the Washington HSAA-member schools supporting football programs was surveyed concerning health and safety practices in the interscholastic football program. Considerable inconsistency was found between and within schools classified as AA, A, and B according to size, especially in organization, medical supervision, and training and conditioning. Size affected primarily furnishing, cleaning, and laundering equipment. Recommendations for furthering healthy and safe practices were formulated.

326. WATSON, Lawrence A. A Survey of Certain Phases of the Junior College Health Education Programs in the State of Washington. M. S. in Physical Education. 1961. 73 p. (R. K. Cutler)

Questionnaires covering course content and college preparation and experience were returned by 22 of the 26 teachers involved. All junior colleges required a course for one quarter which, for practically all, met twice a week for 50 minutes and had 20 to 40 students. Some had coeducational classes. The teachers determined course content in most cases, emphasized personal and mental rather than community and international health, and made no attempt to correlate with or continue high school topical emphases. Master's degree holders and men outnumbered bachelor's degree holders and women two to one. Average teaching experience was ten years and junior college experience five years. Course content and administrative organization varied considerably.

Washington State University, Pullman, Wash. (G. Cooper)

327. BEACH, R. Roy. A Study of Administrative and Coaching Problems of Eight-Man Football in the State of Washington. M. A. in Physical Education. 1961. 43 p. (G. Galligan)

328. CHIVINGTON, Thomas Harold. An Experiment in the Sequence of Teaching the Forehand and Backhand Tennis Skills to College Men. M. S. in Physical Education. 1961. 54 p. (V. Dauer)

329. DAVIS, Rex Stuart. Placement of Selected Tumbling and Balance Stunts in the Elementary School Physical Education Program. M.S. in Physical Education. 1961. 61 p. (V. Shaw)

330. DE VORE, Roland C., Jr. A Comparison of the Oxford-Type and Standard Football Shoe with Regard to Speed and Agility. M.S. in Physical Education. 1961. 67 p. (V. Dauer)

331. LOOSE, W. A. Robert, Jr. A Study To Determine the Validity of the Knox Basketball Test. M.S in Physical Education. 1961. 52 p. (V. Dauer)

332. RACY, Margaret. A Required Physical Education Program for Women at Columbia Basin College. M.A. in Teaching Physical Education. 1961. 36 p. (G. Romney)

333. READING, Lynn James. The Effect of Fatigue, as Induced by the Harvard Step Test, on the Speed of the Offensive Charge in Football. M.S. in Physical Education. 1961. 45 p. (V. Dauer)

334. RIGGIN, Donald Gene. The Status of Instructional Boxing in the High Schools of the Yakima Valley. M.A. in Physical Education. 1961. 75 p. (G. Galligan)

335. SONGSTER, James Wilson. The Relative Effectiveness of Teaching the Three- and Four-Step Approaches to Beginning Bowlers. M.S. in Physical Education. 1961. 98 p. (V. Dauer)

336. SULLIVAN, George Morris. The Effects of Isotonic and Static Contraction of the Quadriceps on Strength and Endurance. M.S. in Physical Education. 1961. 67 p. (V. Shaw)

337. WEBSTER, Nina Mae Susan. The Effects of Cessation of Exercise and Detraining After Training on Body and Organ Weights of Male Albino Rats. M.S. in Physical Education. 1961. 59 p. (V. Shaw)

338. WERNER, Harold Lewis. Relationship Between Selected Throwing Events and Certain Strength and Differential Test Items in Predicting Performance in Javelin Throwing. M.S. in Physical Education. 1961. 64 p. (V. Dauer)

339. WHITING, Gary Lee. The Effectiveness of the Sacrifice Bunt in the Game of Baseball. M.S. in Physical Education. 1961. 50 p. (G. Galligan)

West Virginia University, Morgantown, W. Va. (F. J. Holter)

340. BIRCH, Nancy Lee. A Comparison of Conditioning Programs for Girls Participating in Extramural Field Hockey and Basketball. M.S. in Physical Education. 1961. 149 p. (W. Carruth)

Two conditioning programs for field hockey and three for basketball were developed from the literature and current practices. Members of the girls extramural teams at Falls Church and James Madison High Schools in Fairfax County, Virginia, were tested in the Sargent Jump (strength), Side Step (agility), and 600-yard Run-Walk (endurance) and equated by rank order. The field hockey group that ran laps, lunged, did jumping jacks, and took the stick test daily throughout the season gained significantly in strength, agility, and endurance. Those doing sprints, squat hops, eight-count jumping jack, and run-around-stick increased significantly in agility and endurance. The basketball group using squat thrust, jump at basket, forward-backward run, eight-count jumping jack, and roll-and-sit-through and the group using tape jump, forward-backward run with knees high, jump rope, jackknife, and double treadmill gained significantly in strength and endurance. The group participating in both sports gained in all three tests during the season but regressed significantly in endurance between seasons.

341. MORRISON, Carolyn Jean. Methods of Teaching Girls Basketball. M. S. in Physical Education. 1961. 135 p. (W. Carruth)

Excluding participants in the extramural basketball program, girls in four grade 9 beginning basketball classes were tested and equated into two groups on the basis of basketball skill, form in basketball skills, intelligence, and body-build at the beginning of a five-week unit. Skill was retested midway and skill and form at the conclusion of the unit. One group was taught by the whole-part-whole method and the other by a specially devised "rhythmic approach." The rhythmic group on the midway test matched the skill level of the whole-part-whole on the final test, but no differences were significant. The final form ratings for the rhythmic group were significantly superior at the .01 level.

University of Wisconsin, Madison, Wis. (J. G. Wolf)

342. ANDERSON, Kenneth A. The Effect of the Weighted Ankle Spat on the Jumping Performance, Agility, and Endurance of High School Basketball Players. M.S. in Physical Education. 1961. 96 p. (J. G. Wolf)

Ten high school basketball players were randomly assigned to two groups: an experimental (spat) group wearing the weighted ankle spat in training sessions and a control group that took part in all training sessions without any form of overload. All subjects in the experimental group wore three pounds of lead weights (ankle spat) on each foot. The training period was conducted three days per week for six weeks. Analysis of variance was used to determine the relative effects of the training period. Significant gains were found in the vertical jump in favor of the experimental over the control group. No significant gains were found between groups in the agility run or the 360-yard shuttle run.

343. BARTELS, Barbara A. Construction of a Measure of Antero-Posterior Posture. M.S. in Physical Education. 1961. 82 p. (M. Liba)

The study was designed to determine the objectivity of the subjective grading currently used in the Department of Physical Education for Women at the University of Wisconsin and the validity of a proposed method of assessing antero-posterior posture. The criterion measure was the Massey Test. A random sample of 50 pictures was graded by several judges and inter- and intra-objectivity studied by analysis of variance. The three raters were consistent with themselves and with each other to an acceptable degree. The proposed test could not be validated with the criterion selected.

344. BREES, Clifford D. The Effects of Trampoline Training upon the Jumping Performance, Agility, Running Speed, and Endurance of High School Basketball Players. M.S. in Physical Education. 1961. 64 p. (J. G. Wolf)

Twenty-five sophomore and junior high school basketball players were randomly assigned to three groups on the basis of vertical jump test performance. The trampoline group spent three minutes a day on the trampoline, going as high as possible on each jump. The jump group spent three minutes a day jumping continually as high from the floor as possible. The control group participated in the testing program only. The training program was conducted for five weeks. Analysis of variance was used to determine the relative effects of the training. The trampoline group showed a significant increase over the control group in the 300-yard shuttle run, the vertical jump, and the agility run. Trampoline training had little effect on performance in the standing broad jump or the 30-yard dash.

345. DAVIES, Richard M. A Curriculum Study for the Boys Physical Education Program in the Darlington Public Schools Grades Five Through Twelve. M.S. in Physical Education. 1961. 148 p. (J. G. Wolf)

The purpose of this study was to evaluate the present physical education program at the Darlington Public Schools and to make recommendations for program revisions. A review of the related literature was made to determine the fundamental characteristics and specific objectives of the ideal physical education program. Information on the present program was secured through questionnaires, surveys, testing, and the school cumulative records. The objectives of the Darlington physical education program were found to be in accord with those found in the related literature. Recommendations were made for certain program revisions and expansion.

346. ECKERT, Helen M. Linear Relationships of Isometric Strength to Propulsive Force, Angular Velocity, and Angular Acceleration in the Standing Broad Jump. Ph.D. 1961. 176 p. (G. L. Rarick)

This study was concerned with the relationship between the propulsive force in the standing broad jump and the isometric strength of the leg extensors of ten boys measured repeatedly at ages 8, 10, and 12 years. The propulsive force was computed from cinematographic records of the jump, and strength data were obtained by measuring maximum isometric strength of the hip, ankle, and knee extensors. Results showed a high relationship between the angular velocity at the point of maximal acceleration and the isometric strength of the extensor muscles of the hip joint but showed a low relationship between propulsive force and isometric strength at the knee and ankle joint. The strength of the hip extensors seemed to be the primary factor in broad jumping ability.

347. HEIM, Ray. Wisconsin High School Athletic Rules and Regulations: A Comparison. M.S. in Physical Education. 1961. 86 p. (K. G. Stoedefalke)

Rules and regulations of 54 Wisconsin athletic conferences were examined. Information was obtained by questionnaire, and questions were directed at administrative policies, participation of athletes, officials, equipment, awards, and athletic schedules. The return was 100 percent and the data were converted into percentage form. Conferences were compared relative to size and to the criteria established by Forsythe. Conferences within the state operated without a written constitution and/or bylaws. Policies were inconsistent with regard to the eligibility of participants, official fees, mileage expenses, and the selection of team champions and all-conference awards.

348. HELIXON, Patrick. The Effects of Progressive Heavy Resistance Exercises Using Near-Maximum Weights on the Running and Jumping Ability of First Year High School Track Performers. M.S. in Physical Education. 1961. 66 p. (G. L. Rarick)

The study was designed to determine the effect of a heavy resistance training program upon the running and jumping performance of first year high school track men. Twenty-four subjects were randomly assigned either to an experimental group which engaged in weight training five days a week for six weeks or to a control group which engaged in no weight training. Results showed no significant difference between the experimental and control group at the conclusion of the experiment for the vertical jump, 100-yard dash, running broad jump, and one mile run.

349. LARSON, Larry K. The Four Minute Mile: Its History and Analysis. M.S. in Physical Education. 1961. 113 p. (G. L. Rarick)

This investigation was concerned with the history of the four minute mile, the events which led up to the first four minute mile, and a descriptive survey of the subsequent four minute miles. The investigation presented data on the characteristics of the athletes who had accomplished this feat, their training procedures, and the methods which they used in 51 of the 67 sub-four-minute miles run prior to July 1, 1961. In approximately 2/3 of the instances, the last 440 was run the fastest, with the first 440 being the fastest in 1/3 of the cases. The age at which the greatest number of sub-four-minute miles were run was found to be 24 years, although this feat was accomplished as early as 19 years and as late as 29 years of age.

350. LEE, Robert G. Motor Fitness Levels of Senior High School Boys and Girls in a Rural Wisconsin High School. M.S. in Physical Education. 1961. 53 p. (G. L. Rarick)

This study employed the AAHPER Fitness Test to evaluate the motor fitness levels of a selected group of high school boys and girls over a period of two years. Results of the study disclosed that the girls who participated in physical education throughout the study were significantly superior to the girls who participated only during the initial year. Athletes (boys) were superior in all aspects of fitness to nonathletes (boys) throughout the two-year study. A noticeable increase in motor fitness occurred during the school year in all groups, with no change in performance levels over the summer months.

351. LYON, William R. A Cinematographical Analysis of the Overhand Baseball Throw. M.S. in Physical Education. 1961. 91 p. (J. G. Wolf)

A cinematographical analysis of the overhand baseball throw was made to determine whether there was any definite pattern of joint movement which enabled one pitcher to throw with a greater velocity than another. Three 16 mm motion picture cameras, loaded with Tri-X positive film, were used. The study was based on the motion pictures of eight baseball players, one major league pitcher, and seven University of Wisconsin pitchers. Three of the subjects were left-handed and five were right-handed. The study concluded that those subjects who had the greatest forward flexion at the hip joint at the time of release recorded the highest velocities. The release of the ball occurred when the spinal rotation was between 105° and 115° forward from the line drawn directly from the subject to the target.

352. MARTIN, Margery M. A Study To Determine the Effects of Motivational Techniques on Performance of the Jump and Reach Test for College Women. M.S. in Physical Education. 1961. 62 p. (M. Liba)

The purpose of the study was to determine the effects of group versus individual participation and knowledge versus no-knowledge of score on performance of the jump and reach test. Subjects in the various groups were given six trials under the various motivational conditions. A 2 x 2 factorial analysis of variance was used. Using the average of the best two scores as the performance score, a significant value of F was found for the knowledge-no knowledge source of variation. This same result was obtained using the average of 3, 4, 5, and 6 trials as the performance score. Analysis of trends showed that trial-to-trial performance patterns of the informed group differed from those of the uninformed group. The same results were obtained with the group-versus-individual motivational effect. The presence of others has a favorable effect upon performance and information facilitated performance.

353. OYSTER, Nancy A. The Relationship Between Skeletal Age and Measures of Motor Performance and Muscular Strength of Second Grade Boys and Girls. M.S. in Physical Education. 1961. 95 p. (G. L. Rarick)

Purpose of this investigation was to determine the relationship between physical maturation (carpal development) and measures of motor performance and muscular strength of grade 2 boys and girls. The study group included 49 boys and 39 girls with mean ages of 100 months and 100.2 respectively. Assessment of bone age was made by applying the standards of Greulich and Pyle to X rays of the hand and wrist. Motor performance was measured by scores on the 35-yard dash, the broad jump, and the baseball throw. Static dynamometric measures of the strength of eight muscle groups were used in assessing strength. The findings showed that when the effects of height, weight, and chronological age were held constant, skeletal age was not highly correlated with the motor performance and strength measures.

354. SINGER, Francine. Comparison of the Development of the Overarm Throwing Pattern of Good and Poor Performers (Girls). M. S. in Physical Education. 1961. 58 p. (R. B. Glassow)

Changes in the propulsive phase of the movement of four subjects over a period of four years were studied to determine evidence of developmental trends and to compare high and lower scoring performers as recorded on film. Developmental trends detected were greater rotation of the torso and a tendency to bring the humerus closer to the horizontal on release. While all subjects had the same basic pattern, the high scorers had greater range of movement in the contributing joints and tended to bring the arm backward as the torso moved forward, while the low scoring tended to bring the arm back with the torso and to hold the arm position as the torso moved forward.

355. VICTORS, Evelyn Hudson. A Cinematographical Analysis of Catching Behavior of a Selected Group of Seven- and Nine-Year-Old Boys. Ph.D. 1961. 139 p. (G. L. Rarick)

The purpose of this study was to analyze, by cinematography, the catching behavior of selected 7- and 9-year old boys in order to identify the components of catching skill which differentiate successful from unsuccessful performance and to examine patterns of response associated with success or failure. Ten 7-year-olds and ten 9-year-olds, equally divided between good and poor catchers, served as subjects. All catches were filmed simultaneously, using anterior and lateral views. Distance and ball speed were controlled with the factor of ball size systematically varied. Differences within each age group for most of the components studied were almost as great as differences between age levels. Of the several components of catching behavior examined, hand position immediately prior to contact and the grasping pattern most clearly differentiated successful from unsuccessful performances.

The Woman's College of the University of North Carolina, Greensboro, N.C.

(R. McGee)

356. AKDIK, Ergi. A Compilation of Turkish Folk Dances. M. Ed.

1961. 69 p. (D. Davis)

Turkish folk dances have been assembled which are different in their characteristics and which are compared in formations, styles and movements according to the geographical section of the country from which they come. Each of the six dances has a brief history and the word description of the movement, formation, and style. This is followed by the Labanotation of each dance as well as the music, costume designs, and pictures of the musical instruments.

357. GOSSELIN, Pauline T. A Study of the Effects of Heat and Cold on Reaction Time, Steadiness, Balance, and Motor Performance. M.S. in Physical Education. 1961. 99 p. (C. Ulrich)

Twelve graduate students were exposed to Fahrenheit temperatures of 75 to 80 degrees as the base temperature, then additional ones of 110, 94, 58, 37, and 8 degrees as the experimental temperatures. During these periods, measurements of steadiness, reaction time, balance, and motor performance were taken to provide comparisons with performance at the base temperature as well as among the other temperatures. Exposure of 15 minutes was specified before the various tests were administered. Reaction time was the only factor adversely affected by all of the experimental temperatures. Gross motor activity was more affected by variant temperatures than activity involving smaller movements.

358. KHOURI, Lorraine M. Archery for the Handicapped. M. Ed. 1961. 132 p. (C. Ulrich)

Twelve volunteer subjects--four totally blind and eight partially sighted --were used to determine whether the visually handicapped person could find enjoyment and success in target archery and to determine what adaptations in archery technique were necessary. For the partially sighted student, the wooden block used as a point of aim was painted bright red. A six-foot pole was used as an aiming guide by the totally blind student and was placed so the back of the left hand contacted it when the bow was fully drawn. A braille target face, made from a mixture of sand and shellac applied to alternate colors, enabled the blind student to score his own arrows. The arrows were identified by narrow strips of tape placed around the arrow at the crest. To assure proper alignment with the target, a wooden toe marker was taped to the floor. The visually handicapped students derived enjoyment and benefit from archery.

359. KINGSTON, Margaret. The Effects of Two Training Programs on Swimming Speed, Physiological Efficiency, and Strength of College Women. M.S. in Physical Education. 1961. 129 p. (C. Ulrich)

The exercise-swimming group participated in exercise workouts three times weekly for the first month and in swimming workouts three times weekly during the second month. The swimming group participated in swimming workouts three times weekly for two months. Measurements of abdominal strength, shoulder strength, leg strength, oxygen consumption, vital capacity, cardiovascular efficiency, and speed in swimming were taken prior to the two months' training program, at the end of one month, and again at the end of the training period. Twelve college women, swimming 50 yards freestyle, were used as subjects, and the program in which swimming followed exercise produced greater changes in the measurements.

360. KOVAL, Bess. The Widening Circle (Labanotated Choreography). M.F.A. in Dance. 1961. 23 p. (V. Moomaw)

The dance was based on qualities and step patterns of folk dances from Israel, England, Jugoslavia, Norway, Sweden, and Germany. The theme of the dance was that one may experience many types of joy: quiet, robust, and maternal. One experiences many types of joy at a given time, and within a group many joys are felt at any one moment. These joys arise from the warmth and pleasure of sharing and being with friends. The circle of friendship can always widen to inclose a new addition and envelope it in the warmth of shared joys.

361. MERCER, Emily-Louise. An Adaptation and Revision of the Galloway Attitude Inventory for Evaluating the Attitudes of High School Girls Toward Psychological, Moral-Spiritual, and Sociological Values in Physical Education Experiences. M. Ed. 1961. 57 p. (G. Hennis)

The Thurstone and Likert techniques of attitude scale construction were used to revise and adapt the Galloway Attitude Inventory for use with high school girls. The final inventory proved reliable and valid for measuring the selected values on the basis of responses from 93 grade 12 girls.

362. OSBORNE, Barbara Jean. An Historical Study of Physical Education in Germany and Its Influence in the United States. M. Ed. 1961. 100 p. (R. McGee)

The tracing of physical education in Germany and its introduction into the United States was accomplished through biographical sketches of the outstanding leaders in Germany--Basedow, GutsMuths, Jahn, and Spiess --and of the influential German refugees--Follen, Beck, and Lieber-- who fled from Germany for the sake of liberalism. Shown also were the influence of the American Turnerbund and how Brosius and Betz, who were born in the United States of German descent, played such important roles in introducing physical training into the public schools in this country. The nine German men whose lives were traced showed that physical education must be promoted by men of purpose and dedication.

363. PARKER, Nancy Kay. The Relationship Between Motor Ability and Self-Concept of Women Non-Physical Education Major Students and Physical Education Major Students. M. S. in Physical Education. 1961. 61 p. (G. Hennis)

The non-physical education major students were categorized according to low, middle, and high motor ability groups, and the major group was classified as a separate high motor ability group. The 71 college women showed no relationship between motor ability and self-concept as measured by the "Who Am I" Twenty Statements Test. Self-concept differed significantly only between the low non-physical education major group and the physical education major group.

364. REDDECK, Gwen. A Written Guide To Aid in the Teaching of Advanced Skills in Softball with Reference to Diagrams, 35mm Slides, and a 16mm Film. M. Ed. 1961. 142 p. (E. Griffin)

A teaching guide was written on offensive and defensive skills in softball, placing emphasis on advanced skills and team strategies. The major aspects of each position, techniques, and offensive and defensive strategies were explained. The film showed the changes in footwork involved in a basic skill even though the position may be different. The slides illustrated specific skills or situations by stopping the motion. Utility was enhanced by correlating the teaching manual, film, still shots, and series of diagrams.

365. RIGOR, Myra. Meetings and Departures (Labanotated Choreography). M. F. A. in Dance. 1961. 49 p. (V. Moomaw)

Theme: Life is a series of meetings, departures, and disappointments; yet each phase seems meaningful within itself. Meetings and departures may be formal, joyful, sentimental, or reluctant. Disappointments may be tinged with nostalgia to the point of despair or near hysteria. A person's feelings or reactions are dependent upon circumstances. Sequence: The dance begins with greetings among the performers. The Wanderer enters, leaves, and there is sorrow. Time heals this and we become joyful once again from the hopeful prospect of seeing old friends. The Wanderer returns to a joyous celebration. As the friends exit to go about their business, the Wanderer is left alone and is overcome with nostalgia. The Consoler returns and comforts her but, once again becoming restless, she leaves the Consoler behind in disappointment. The group of friends returns to find the Consoler alone, and in the midst of their meeting the Wanderer enters again--only to find that time has changed her relationship to the group. In her attempt to become a part of the group again, she finds the former friends unheedful of her and is left alone in disappointment.

366. UPCHURCH, Catherine. The Construction of Slides To Illustrate Selected Volleyball Skills for Women. M. Ed. 1961. 53 p. (E. Griffin)

Slides on volleyball were prepared to improve the caliber of classroom instruction, to increase participation in the intramural program, to add interest to corecreational activities, and to add to the visual aids in volleyball skills using women subjects. The series of 54 slides covered hand position, serve, pass, set-up, spike, net recovery, and block and was accompanied by a guide.

367. VOGT, Mary Ann. The Effect of Grip and Wrist Strengthening Exercises on Tennis Playing Ability. M. S. in Physical Education. 1961. 99 p. (G. Hennis)

Eighteen college women of intermediate skill, or better, in tennis provided the data for determining whether exercises for strengthening grip and wrist would have any effect on tennis playing ability. The program of exercises and testing lasted for five weeks and followed an experimental design using two groups. Grip strength was not significantly increased, so the effect on tennis playing ability could not be determined.

NOTES

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Periodicals Reviewed

(Concluded)

Journal of General Psychology
Journal of Genetic Psychology
****Journal of Gerontology***
****Journal of Health & Human Behavior***
Journal of Heredity
Journal of Higher Education
****Journal of Home Economics***
****Journal of Laboratory and Clinical Medicine***
****Journal of the Maine Medical Association***
Journal of Mental Science
Journal of Neurophysiology
Journal of Nutrition
****Journal of Occupational Medicine***
****Journal of Pediatrics***
****Journal of Personality***
****Journal of Physical Education***
Journal of Physiology
Journal of Psychology
****Journal of School Health***
****Journal of Social Psychology***
****Journal of Sport Medicine and Physical Fitness***
****Journal of Teacher Education***
****Lancet***
Medical Journal of Australia
****Medicine Dello Sport***
****Mental Hygiene***
Military Surgeon
****Monographs of the Society for Research in Child Development***
****Nagoya Journal of Medical Science***
National Conference of Social Work
National Society for the Study of Medical Research
Nation's Schools
****New England Journal of Medicine***
****Nutrition Abstracts and Reviews***
****Nutrition Reviews***
****Parks and Recreation***
Peabody Journal of Education
****Pediatrics***
****Perceptual & Motor Skills***
Phi Delta Kappan
Philosophical Studies
****Physical Educator***
****Physical Therapy Review***
Physiological Reviews
****Physiologist***
****Postgraduate Medicine***
****Proceedings of the Society for Experimental Biology and Medicine***
****Psychoanalysis and Psychoanalytic Review***
Psychological Bulletin
****Psychological Monographs General and Applied***
Psychological Reviews
****Psychosomatic Medicine***
****Public Health Reports***
****Quarterly Journal of Experimental Physiology and Cognate Medical Sciences***
****Quarterly Journal of Experimental Psychology***
Quarterly Review of Biology
Recreation
****Rehabilitation Record***
Research Bulletin of the NEA
****Research Quarterly, AAHPER***
Safety Education
Scholastic Coach
****School of Aerospace Medicine***
School Review
****Science***
****Sechenov Physiological Journal of the USSR***
Social Science Research Council
****Sociological Abstracts***
****Sociological Review***
****Sociology and Social Research***
Sociometry
****Sportarzliche Praxis***
****Swimming Pool Age***
Today's Health
Ulster Medical Journal

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Institutions Reporting

University of British Columbia
University of California, Los Angeles
University of Colorado
Florida State University
George Williams College
Illinois State Normal University
University of Illinois
Indiana University
State University of Iowa
University of Maryland
University of Michigan
University of Minnesota
New York University
Northern Illinois University
Ohio State University
Ohio University
University of Oregon
Pennsylvania State University
San Diego State College
Smith College
South Dakota State College
University of Southern California
Springfield College
Temple University
Texas Woman's University
University of Utah
University of Washington
Washington State University
University of Wisconsin
West Virginia University
Woman's College, University of North Carolina

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